

CALIFORNIA COASTAL COMMISSION

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REVISED STAFF REPORT AND RECOMMENDATION**ON CONSISTENCY DETERMINATION**

Consistency Determination No.	CD-063-03
Staff:	MPD-SF
File Date:	7/23/03
60th Day:	9/21/03
75th Day:	10/6/03
Extended to:	2/20/04
Commission Meeting:	2/18/04

FEDERAL AGENCY: U.S. Bureau of Customs and Border Protection

PROJECT
LOCATION:

U.S./Mexican Border, Areas V and VI (i.e., between the International Wastewater Treatment Plant east of Smuggler's Gulch and the Pacific Ocean), City of San Diego (Exhibit 1)

PROJECT
DESCRIPTION:

Construction of approximately 3.5 miles of secondary and tertiary fencing (parallel to the existing Border Fence), with associated patrol and maintenance roads, lights, sensors, cameras, and related infrastructure (Exhibits 1-4)

STAFF NOTE: On January 22, 2004, the Bureau of Customs and Border Protection (CBP) submitted a response to the Commission staff's previous recommendation (prepared for October 2003 Commission meeting). In that response, which is contained in full in the separate attachment being mailed with this revised staff recommendation (and in part in Exhibits 33-36), the CBP states its positions that:

1. The proposed fill in Smuggler's Gulch is the most practicable alternative that satisfies the stated purpose and need and complies with IIRIRA (the Illegal Immigration Reform and Immigrant Responsibility Act of 1996), and the CBP maintains it would be less environmentally damaging than the switchback

alternatives the Commission staff stated (in the previous recommendation) were environmentally preferable;

2. A sediment basin across the bottom of the canyon at Smuggler's Gulch is not a necessary project component because other sediment controls should be adequate to protect the Tijuana Estuary from project-induced sediments;
3. A portion of the fencing on the west side of Monument Mesa can be eliminated (specifically, the southern 2/3 of the fence parallel to the shoreline would be eliminated, and the fence along the northern 1/3 would tie into the bluff approximately where the dirt road traversing the bluff face reaches the toe of the bluff);
4. CBP will narrow the corridor in Baja California birdbush habitat "to the maximum extent practicable";
5. Eliminating Lichty Mesa capping would not be consistent with either archaeological or habitat preservation goals;
6. CBP does not agree to increase mitigation ratios as requested by the Commission staff;
7. CBP agrees to make staff-recommended changes to the Baja California birdbush salvage plan.

In addition, on January 27, 2004, the Commission staff met with the CBP to discuss and clarify any unresolved issues and areas of disagreement. In that meeting the CBP also verbally agreed to the following:

1. After discussions with State Parks, CBP will consider relocating the fencing at the bottom of the bluff along the northern side of Monument Mesa from the southern side of the parking lot below the mesa to the northern side of the parking lot.
2. CBP will monitor sedimentation at Smuggler's Gulch, and if the monitoring shows increased sedimentation from the project footprint, and other remediation efforts are not successful in eliminating this increase, CBP will consider constructing a downstream sediment basin to protect the estuary as an additional remediation measure.
3. CBP agrees to submit the water quality plans (SWPPP and WQCP) to the Commission staff for its review and concurrence, as well as the other project and mitigation plans that are now incomplete, including:

- a) detailed mitigation and monitoring plans for habitat restoration for threatened endangered and other rare species, revegetation of disturbed, cut, and fill slopes, abandoned road restoration efforts, and for wetland restoration to offset wetland fill from the project;
 - b) revised plans for construction at Lichty Mesa (CBP needs to modify the cap at Lichty Mesa, due to engineering measures needed to protect the archaeological resources, and relocating the cap northward may lessen adverse habitat impacts);
 - c) revised plans for construction in Baja California birdbush habitat;
 - d) aesthetic plans being worked out with the Dept. of Parks and Recreation for fencing and other features at Border Field State Park;
 - 3) archeological agreements with SHPO to mitigate cultural resource impacts; and
 - f) geologic reports and plans or modifications to address geologic constraints.
- 4. The cut and fill volumes have been clarified (as reflected in this revised staff report);
 - 5. CBP will attempt to narrow the corridor in Baja California birdbush habitat to the maximum extent practicable; however engineering and habitat issues and tradeoffs will constrain these changes (e.g., due to road geometry, reducing grading on the mesa top would increase grading amounts within the canyon, increasing fill slope size and wetland impacts in Smuggler's Gulch);
 - 6. CPB is working with Dept. of Parks and Recreation on aesthetic designs at Border Field State Park, including relocating the fence from the south to the north side of the parking lot along the northern boundary of Monument Mesa, and stopping the fence about 1/3 of the way down the western boundary of Monument Mesa (leaving the southern 2/3 of the western side of the mesa unfenced); and
 - 7. CBP submitted additional geotechnical reports, including a third-party geotechnical review (dated Oct. 3, 2003, by Christian Wheeler Engineering), a Kleinfelder report dated March 7, 2003, and a full copy (with complete appendices) of a previously submitted Kleinfelder report dated June, 11, 1999. CBP states that where slope stability concerns are raised at Smuggler's Gulch additional reinforcing may be incorporated into the project.

Finally, in the meeting CBP expressed its opinions: (1) that the overall project as proposed (and as modified above) will improve protection of sensitive environmental resources north of the border by decreasing illegal immigration and consequent border patrol activities; (2) that the Smuggler's Gulch fill is less damaging than non-fill switchback alternatives and satisfies the stated purpose and need; (3) that the cap at Lichty Mesa is needed to protect archaeological resources (and will help protect the remaining mesa habitat by reducing immigration and capture activities); (4) that the fence around Monument Mesa will improve the public's sense of safety and will benefit recreation (and that the Commission staff's assertion to the contrary is speculative); and (5) it would be necessary for USBP to increase patrol activities in the estuary in response to an increase in illegal activity if the proposed Border Improvement System (BIS) is not completed.

Based on these communications, the staff has made a number of revisions to the previous report. In addition, concerning the more technical submittals concerning water quality issues, the staff is continuing to review the submittal and expects to publish an addendum to this report covering this issue in greater detail.

EXECUTIVE SUMMARY

The U.S. Bureau of Customs and Border Protection (CBP) (now part of the Department of Homeland Security) has submitted a consistency determination for secondary and tertiary fencing and additional infrastructure improvements at the U.S./Mexican Border. The proposal is based on the CBP mandate contained in sections 102(a) to (c) of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA; Pub. L. 104-208; 8 USC § 1103nt), which directs the Attorney General of the U.S. to: "...provide for the construction along the 14 miles of the international land border of the U.S., starting at the Pacific Ocean and extending eastward, of second and third fences, in addition to the existing reinforced fence, and for roads between the fences." The IIRIRA also directs the Attorney General to incorporate into the above-described project "... such safety features as are necessary to ensure the well-being of border patrol agents deployed within or in near proximity to the system." The IIRIRA also provides for: (1) an annual increase in the number of border patrol agents (and support personnel) over a 5-year period; and (2) deployment of border patrol agents in proportion to the level of illegal entry occurring (and expected) in any particular area.

The CBP's predecessor agency, the U.S. Immigration and Naturalization Service (INS), has already built secondary and tertiary fencing, roads, and other improvements in 9 miles of the 14 mile stretch of the U.S. border to which the IIRIRA refers, portions of which are in the coastal zone and received previous Commission authorization. These already-constructed segments were in relatively level terrain and did not raise major resource protection issues. The three remaining areas (Areas I, V, and VI) were the subject of more detailed planning (and

an EIS) due to the significant resource protection issues. The subject consistency determination addresses the segments within the coastal zone (Areas V and VI), where the proposed border fencing, roads, and infrastructure would result in significant adverse effects to: (1) lands set aside for protection within the Multiple Species Conservation Program (MSCP); (2) the Tijuana River National Estuarine Research Reserve (TRNERR); (3) State and County of San Diego natural park lands and open space; (4) state- and federally-listed threatened and endangered species; (5) valuable wetland (including riparian) and upland habitat (including maritime succulent scrub, coastal sage scrub, southern maritime chaparral and native grasslands); (6) public access and recreation (primarily at Border Field State Park); and (7) scenic public views and landforms, cultural resources, and water quality.

The proposal threatens to weaken the overall credibility and effectiveness of the entire multi-species habitat conservation program, as these lands were carefully and scientifically evaluated to provide regional ecological benefits to meet regional preservation goals and to mitigate the cumulative impacts of other development in the region.

Given the serious erosion hazards characteristic of the soils in this region, particularly the erosion potential arising from the proposed cutting and filling of 4.3 million cu. yds. in Smuggler's Gulch (including a 1.85 million cu. yd. fill slope and roadbed), the project poses significant threats to the nationally significant Tijuana National Estuarine Research Reserve, which contains habitats that are highly sensitive to sedimentation. The project includes preliminary commitments for erosion controls, but while it "considered" a sediment basin to protect the estuary, the CBP maintains that such a basin would be unnecessary because it assumes the project will not increase sedimentation, but in fact will reduce it by 27%. The California Department of Parks and Recreation has commissioned a study that raises questions about the CBP's assumptions and supports the contrary conclusion that the project will increase sedimentation and adversely affect the estuary. The CBP responds that the level of sedimentation would be insignificant and could be adequately controlled through Best Management Practices. [Note: The Commission staff is still reviewing the revised sedimentation analysis (Exhibit 36) and will prepare an addendum prior to the hearing.] The Commission is concerned that the project may increase sedimentation and adversely affect the estuary, even with erosion controls. In any event, the extent of wetland fill and grading for a single switchback alternative, which would reduce fill in Smuggler's Gulch, would lessen the project's impacts. For example the CBP's recently submitted switchback analysis (Exhibit 35) shows 0.9 acres of wetland fill from the single switchback alternative, compared to 2.7 acres of wetland fill from the proposed fill), as well as far less grading in Smuggler's Gulch (2.7 million cu. yds. of grading for the single switchback alternative, compared to 4.3 million cu.yds. of grading for the proposed project).

The project raises fundamental policy conflicts in that it is not an allowable use under three Coastal Act policies: (1) Section 30240, which limits uses within environmentally sensitive habitat areas to "... only uses dependent on environmentally sensitive habitat area resources;"

(2) Section 30233, which limits allowable uses for wetland fill to eight allowable uses (typically water-dependent and habitat restoration activities, and none of which apply to this project); and (3) Section 30236, which limits activities that channelize or substantially alter rivers and streams to three allowable uses (necessary water supply projects, flood control projects, and habitat improvements). The project is also inconsistent with a number of other specific requirements of Sections 30240, 30231, 30233, 30210-30212, 30240(b), 30251, and 30253, including the requirement of several Coastal Act policies (such as Section 30233) for adoption of less environmentally damaging feasible project alternatives.

The CBP considered three primary alternatives: the No Project Alternative, a more damaging “Tactically Optimum” Alternative, and the proposed “Multi-tiered Fence” Alternative. The CBP rejected several other alternatives “...because they did not satisfy operational needs, could not provide long-term or sustained control of the border, would expand or maintain the existing enforcement footprint, would create a greater direct or indirect impact, and/or did not comply with the spirit and intent of IIRIRA.” These eliminated alternatives included: (1) fortification of the primary fence; (2) fence only (with no patrol road); (3) a bridge alternative and two switchback alternatives at Smuggler’s Gulch; (4) secondary fence only (no tertiary fence); (5) third fence alternative alignments; and (6) alignments around and over Bunker Hill. The Commission disagrees that the provisions of IIRIRA justify or dictate rejection of several less environmentally damaging feasible and practicable alternatives, including at least one of the two switchback alternatives at Smuggler’s Gulch (i.e., the single switchback alternative), a narrowed project corridor east of Smuggler’s Gulch (agreed to in concept, but the extent of narrowing is unclear at this point), and elimination of the fencing around most of Monument Mesa and on Lichty Mesa.

The CBP contends in its consistency determination that its proposal is consistent with the Coastal Act, but at the same time it acknowledges in its consistency determination that “In order to comply with this statute [IIRIRA], some impacts to coastal resources are unavoidable.” In making this statement, the CBP appears to be arguing that while full consistency may be unachievable, its proposal meets the CZMA requirement that it be “consistent to the maximum extent practicable,” because existing federal law (i.e., IIRIRA), in mandating the fence improvements, provides for a lesser standard¹ to the degree that adverse environmental consequences stemming from whatever improvements are needed in order to comply with IIRIRA are inevitable. For example, the CBP asserts that the proposed approach constitutes the least environmentally damaging design that could be implemented “... without jeopardizing the effectiveness of the infrastructure components or hindering the operations of the USBP.” In other words, the CBP believes it could not make further environmental concessions and still comply with IIRIRA (and other applicable federal standards and

¹ Regulations implementing the CZMA define “consistent to the maximum extent practicable” to mean “fully consistent with the enforceable policies of management programs unless full consistency is prohibited by existing law applicable to the Federal agency.” [15 CFR Section 930.32]

regulations). Nor does it believe any such concessions are necessary for environmental reasons, as it believes: (1) that the overall project will improve protection of sensitive environmental resources north of the border by decreasing immigration and Border Patrol activities; (2) that the Smuggler's Gulch fill is less damaging than non-fill switchback alternatives; (3) that the cap at Lichty Mesa is needed to protect archaeological resources (and will help protect the remaining mesa habitat by reducing immigration and capture activities); (4) that the fence around Monument Mesa will improve the public's sense of safety and will benefit recreation. The CBP's goal of establishing barriers sufficiently intimidating to deter illegal border crossings must be balanced against habitat protection and recreation goals for the region. However while a balancing of goals may be warranted, the proposed project does not adequately address habitat and recreational resource protection concerns and therefore does not strike an appropriate balance. The Commission disagrees with the CBP's conclusions that the project will improve resource protection and notes that Congress did not specify a particular design for the proposal. The CBP has not presented a convincing argument that the proposed project is the least environmentally damaging practicable project, or that the alternatives of replacing the Smuggler's Gulch with a single switchback alternative, and eliminating fencing on Lichty and Monument Mesas, which it has rejected, will in fact prevent compliance with the IIRIRA. In the absence of such a showing, the CBP has not demonstrated that its project is consistent "to the maximum extent practicable" with the policies of the California Coastal Management Program (CCMP).²

In conclusion, for the reasons explained in detail in this staff report, the current CBP proposal does not properly balance border patrol and resource protection needs, and feasible alternatives are available that would significantly lessen adverse impacts to coastal zone resources and still enable the CBP to meet its border patrol needs. The project is not fully consistent or consistent to the maximum extent practicable with Sections 30240(a), 30231, 30233, 30210-30212, 30240(b), 30251, and 30253 of the Coastal Act. In addition, even if such inconsistency were not readily apparent, in many issue areas, details and mitigation and monitoring plans are incomplete. These gaps in necessary information in and of themselves preclude the Commission from finding this project to be consistent with Sections 30240(a), 30231, 30233, 30210-30212, 30240(b), 30251, and 30253 of the Coastal Act.

²Even the CBP accepts that, due to environmental consequences at Border Field State Park, the beach area, and at Bunker Hill, IIRIRA does not require continuous triple fencing and roads for the entire 14 mile length of the border fence project. The CBP has determined it can meet its mission needs with only the primary fencing along and across the beach and the steep slopes atop and on the eastern side of Bunker Hill. If the IIRIRA dictated continuous roads and fencing (which it does not), the CBP could not make these concessions.

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I. STAFF SUMMARY AND RECOMMENDATION:

A. Project Description. The CBP has submitted a consistency determination for the completion of portions of a Border Infrastructure System. The entire system starts at the Pacific Ocean side of the U.S. Mexican Border in San Diego and extends approximately 14 miles inland, to a point east of Tin Can Hill, near the foothills of the San Ysidro Mountains. The CBP has divided the project into six areas, three of which have already been authorized, and a fourth of which is well outside the coastal zone. Approximately nine miles in Areas II, III, and IV of the infrastructure system (Exhibit 1) have been completed or are currently under construction. These activities were undertaken as pilot projects for the infrastructure system and were addressed in previous NEPA documents (and in consistency and negative determinations CD-111-92, ND 118-96, ND 41-93, ND 99-92, ND-036-01 and ND-039-03). The CBP's current proposal is for completion of the infrastructure system in Areas I, V and VI. However Area I is several miles outside the coastal zone, and the Commission staff has determined that those improvements would not affect the coastal zone. Accordingly, the

CBP's current consistency determination is for the improvements proposed in Areas V and VI, from a location one half mile west of I-5 (and just west of the International Wastewater Treatment Plant) to the west side of Monument Mesa near the Pacific Ocean (Exhibits 1-3).

The U.S./Mexican border is currently secured through a primary fence. The proposed project would consist of a secondary fence, a patrol road between the primary and proposed secondary fences, a tertiary fence, a maintenance road between the proposed secondary and tertiary fences, lights, and "Integrated Surveillance and Intelligence System" (ISIS) components (e.g., lights, sensors, cameras). The width of the corridor between the primary and secondary fences in relatively level areas would typically be 130 feet, and an additional 20 to 24 feet between the secondary and tertiary fences (Exhibit 4). These distances would vary in areas of hilly terrain, where the tertiary fence would probably be installed at the northern edge of the cut/fill slope. In Smuggler's Gulch, the CBP proposes an extensive 1.85 million cu. yds. buttress fill (and a total of 4.3 million cu. yds. of grading (counting both cutting and filling)), with a maximum fill height of 160 ft. above existing grade, a north to south width of 800-900 ft., and a canyon width of approximately ½ mile (east to west)(Exhibits 7 and 23). The materials obtained from the cut areas would be used as fill in the lower elevations, principally Smuggler's Gulch, and to provide an entrance and exit ramp at Lichty Mesa, which would be partially capped (Exhibit 25). The FEIS states these cut-and-fill activities are needed to provide a road surface that does not exceed a 10 percent grade and to avoid the need to purchase construction materials, thus minimizing construction costs. The CBP elaborates:

The design for this alignment was revised during the preparation of the Final EIS in an attempt to reduce the construction footprint and consequent environmental effects within the canyon bottom. The revisions also incorporated an extension of the road and fence platform across Goat Canyon on the western end of Area V. The revised alignment was maintained as close to the border and as straight as possible, while avoiding the USIBWC sewage collection system. The design requires construction of an earthen embankment across Smuggler's Gulch with the fill material being excavated from the two adjacent mesas (cut-and-fill). The vertical grades to transition from the mesa would be kept to a maximum of 10 percent. The road/fence platform geometry would require about ...[4.3] million cubic yards of earthwork and about 92 acres for construction. The original design required about 85 acres. The new road/fence platform geometry results in a fill height of [160] ... ft ... at the base of Smuggler's Gulch. The additional height (and consequent earthwork) was designed to avoid a cut into the top of the mesa east of Smuggler's Gulch where sensitive plant species occur. However, a larger and deeper cut into Spooner's Mesa was required to compensate for the additional fill material. The fill will be engineered at a slope of 1.5H:1V. The average depth of the cuts in the two adjacent mesas would be 60 to 70 ft and will also be 1.5H:1V slopes. An existing slip has been identified on the east face of the canyon wall, which will require over excavation and an engineered backfill. The fill proposed in Smugglers Gulch will act as a buttress to this existing slip.

Access to the base of the canyon and USIBWC's facilities will be maintained by providing a 25-ft-wide access road that switchbacks down the north and south fill slopes of the road/fence platform embankment in the canyon. Parallel ditches with embankment curbs, downdrains, stilling basins and/or water bars will be installed along these roads to control surface run off and consequent erosion and sedimentation. Inclusion of these roads and erosion control measures increased the width of the footprint to about 800 ft in Smuggler's Gulch. This western end of this alignment was also revised since the Draft EIS to extend across Goat Canyon and terminate as a cul-de-sac at the base of Bunker Hill. The original design described in the draft EIS had the Border Infrastructure System parallel Goat Canyon along the east bank for about 800 ft. This design required substantial cut-and-fill activities along the east bank. The new design presented herein slightly reduces the footprint and brings the secondary fence closer to the existing primary fence. An existing box culvert in Goat Canyon will be replaced to allow for an increase in the existing roadway width. Concrete retaining walls will be required along on both sides of the new box culverts to support the additional fill and to reduce the footprint within the Goat Canyon stream bottom. A 3-dimensional topographical depiction of the embankment and mesa tops, upon completion of the Border Infrastructure System, is presented in Figure 2-9[Exhibit 7]. Photographs providing a conceptual depiction of the embankment are presented in Figure 2-10 [Exhibit 24].

The CBP's most recently updated its calculations of proposed grading amounts and fill heights as follows:

The proposed project design currently includes an embankment height of approximately 160 feet in Smuggler's Gulch. The embankment will require an estimated 1,848,081 cubic yards of fill. The estimated earthwork volume for all of Phase II, including cut and fills, is 5,760,529 cubic yards. This volume includes all work proposed within the Border Field State Park [BFSP], Smuggler's Gulch and the Tin Can Hill [outside the coastal zone] areas of the project as follows:

	Cut (CY)	Fill (CY)	Total (CY)
BFSP	14,548	237,257	251,805
Smuggler's	2,487,838	1,848,081	4,335,919
<u>Tin Can</u>	<u>639,747</u>	<u>533,058</u>	<u>1,172,805</u>
Total (CY)	3,142,133	2,618,396	5,760,529

The project also includes:

Fencing Materials. The secondary fence will consist of vertical secura metal mesh panels attached to 16-foot poles. [Secura mesh is a 16-gauge, expanded metal that provides visibility through the fence (except at oblique angles), yet is small enough to prohibit saws, files and other types of cutting equipment from being inserted into the holes.] The poles would be anchored to a 12-inch wide by 4-foot deep concrete footing. Additional 6-foot panels would be secured to the top panels. The tertiary fence would typically be a 5- to 8-foot high chain link fence.

Roads. Patrol roads would consist of a compacted sub-base and 12 inches of Class II material saturated with PennzSupress™ or equivalent product. The patrol road would be 24 feet wide with 12-foot shoulders. The maintenance roads would be constructed by grading the soil surface (i.e., no all weather surface would be placed on the maintenance road). This road would be expected to be 12 to 18 feet wide.

Lighting. Lights would be placed on poles approximately 50 feet high placed at 200 to 300 feet apart. The lighting design was developed to ensure that no more than 0.1 foot candles of illumination would be experienced at the northern toe of the construction footprint. Therefore, ambient light conditions north of the Border Infrastructure System would not be substantially increased.

The project also includes approximately 13 to 17 remote video surveillance (RVS) systems proposed for installation within Areas IV, V, and VI.

The U.S. Army Corps of Engineers (Fort Worth District) is in charge of the planning and design, land acquisition, and construction management. The California National Guard is the construction agent. The Border Patrol will maintain the system (including erosion controls, drainage structures, and revegetation efforts). Project cost is approximately \$58 million. The CBP estimates the construction period to be five to seven years (these cost and time estimates include Area 1, outside the coastal zone). Construction would be limited to daylight hours, and the CBP “presently envisions” construction to be limited to week days, and, at Border Field State Park, “restricted on holidays and weekends” (except for emergency situations).

B. Project Need. The CBP summarizes the project need as follows:

Furthermore, there is a need to halt the continual influx of illegal aliens and smugglers into the San Diego area by creating a permanent deterrence through a certainty of detection and apprehension. The objective of the proposed action is to provide for integration of infrastructure and technology into the current strategy for border control. The proposed action would develop a safe and effective enforcement zone near the border that would eliminate illegal foot and vehicle traffic within the 14-mile

corridor and thus maximize the proactive, deterrent enforcement capability of the United States Border Patrol (USBP), while gaining the necessary and desired permanent status of deterrence. The current road conditions and operational constraints increase risks to the health and safety of USBP agents. Agents and their vehicles are routinely subjected to rocks and other objects being thrown at them. Windshield replacement costs for the three border stations (Imperial Beach, Brown Field and Chula Vista) have routinely exceeded several thousands of dollars each year, due to rocks and other objects thrown from the Mexican side of the border. Furthermore, steep, unimproved roads have resulted in numerous injuries and even fatalities. During the last two years alone, three San Diego Sector agents and one maintenance worker have lost their lives in vehicle accidents caused by unsafe road conditions, including the Smuggler's Gulch area.

Another need is to reduce the current enforcement footprint that will ensure a more efficient and effective control of the border region. Historically, the USBP San Diego Sector, was required to expand their apprehension and enforcement actions up to five miles north of the border. These actions necessitated incursions into residential areas, commercial and industrial developments, parks and open areas, with potential effects on soils, vegetation, cultural resources, and other sensitive resources. The Border Infrastructure System, once complete, would significantly reduce the enforcement actions north of the system and the concomitant effects to the human and natural environments. The purpose, therefore, of the Border Infrastructure System is to lessen the overall impact of the enforcement footprint, maximize the deterrent enforcement profile, and safeguard local neighborhoods, businesses, and environmental resources.

The Congressional authorization for these improvements is contained in the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA; Pub. L. 104-208; 8 USC § 1103nt)), specifically Section 102, which provides:

SEC. 102. IMPROVEMENT OF BARRIERS AT BORDER.

(a) IN GENERAL- The Attorney General, in consultation with the Commissioner of Immigration and Naturalization, shall take such actions as may be necessary to install additional physical barriers and roads (including the removal of obstacles to detection of illegal entrants) in the vicinity of the United States border to deter illegal crossings in areas of high illegal entry into the United States.

(b) CONSTRUCTION OF FENCING AND ROAD IMPROVEMENTS IN THE BORDER AREA NEAR SAN DIEGO, CALIFORNIA-

(1) IN GENERAL- In carrying out subsection (a), the Attorney General shall provide for the construction along the 14 miles of the international land border of the United

States, starting at the Pacific Ocean and extending eastward, of second and third fences, in addition to the existing reinforced fence, and for roads between the fences.

(2) PROMPT ACQUISITION OF NECESSARY EASEMENTS- The Attorney General, acting under the authority conferred in section 103(b) of the Immigration and Nationality Act (as inserted by subsection (d)), shall promptly acquire such easements as may be necessary to carry out this subsection and shall commence construction of fences immediately following such acquisition (or conclusion of portions thereof).

(3) SAFETY FEATURES- The Attorney General, while constructing the additional fencing under this subsection, shall incorporate such safety features into the design of the fence system as are necessary to ensure the well-being of border patrol agents deployed within or in near proximity to the system.

(4) AUTHORIZATION OF APPROPRIATIONS- There are authorized to be appropriated to carry out this subsection not to exceed \$12,000,000. Amounts appropriated under this paragraph are authorized to remain available until expended.

(c) WAIVER- The provisions of the Endangered Species Act of 1973 and the National Environmental Policy Act of 1969 are waived to the extent the Attorney General determines necessary to ensure expeditious construction of the barriers and roads under this section.

[Staff Note: No waiver provision pursuant to (Section 102(c) above) has been implemented to date. The CBP has published a Final EIS pursuant to NEPA and received a non-jeopardy Biological Opinion from the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act.]

C. History of Border Patrol Efforts in San Diego. The following FEIS excerpts provide relevant history on border enforcement efforts:

The INS[CBP] has reported that the U.S./Mexico border is breached more than any other international border in the world. It is a large, diverse and difficult boundary to effectively enforce without the use of a complex infrastructure (i.e., fences, lights, roads, and cameras). In spite of stepped-up enforcement efforts, national statistics show a dramatic rise in the number of apprehensions made throughout the southwest border: from 979,101 in 1992 to nearly 1.6 million in 1999 (USBP 2000). The INS[CBP] estimates that there are currently seven to nine million illegal aliens in the United States, although some studies have indicated that this figure is probably closer to 10 million. Since the terrorist attacks of September 11, 2001, even greater importance has been placed on securing the Nation's borders.

Until the early 1990s, there was limited awareness of the southwest border issues and little national attention was given to illegal trans-boundary activity. As a result, the USBP's growth was nominal, funding for enforcement efforts fell short, and the USBP was forced to function under severe constraints. Recent events related to illegal immigration and narcotics smuggling have increased the Nation's awareness and generated substantial interest in controlling the southwest border. National concern has led to increased funding and staffing and has created new opportunities in the development of proactive border control strategies, as demonstrated in patrol and enforcement operations throughout the southwest border area (e.g., Operations Gatekeeper, Hold-the-Line, Safeguard, and Rio Grande).

... Initial efforts to augment operations with such infrastructure yielded promising results, effectively hindering illegal border traffic. In 1993, the installation of the primary border fence along a 14-mile stretch of border separating Tijuana, Baja California, Mexico from San Diego, California, significantly assisted the USBP's efforts in deterring smuggling attempts via drive-throughs using automobiles and motorcycles. ...

After construction of the primary fence was completed, the frequency per month of drive-through attempts dropped into the single digit range and for extended time periods, the USBP experienced no drive-through attempts. The reduction in drive-through attempts was the direct result of combining the deterrence factor of the primary fence and Operation Gatekeeper: a manpower intensive initiative meant to restore the sovereignty of the San Diego Sector's border region. It is important to note that using the fence in this manner not only substantially reduced the drive-through problem; it also reduced the enforcement footprint previously necessary to arrest violators.

While the success of Operation Gatekeeper is indisputable, its geographic footprint within the 14-mile border segment was quite large. ... As undocumented aliens (UDAs) and smugglers breached the primary fence and attempted to allude[sic] detection and apprehension, USBP agents were forced to chase the illegal entrants into environmentally sensitive areas such as the Tijuana estuary, East Otay Mesa, Spring Canyon, and into residential areas of Imperial Beach, Brown Field and Chula Vista This large enforcement footprint not only created greater impacts on the environment, but it also continues to negatively affect the efficiency of operations by requiring an inordinate number of agents to secure the border. ...

Although Operation Gatekeeper was very successful, it was extremely labor intensive and costly. It highlighted the deterrence capability of combining infrastructure and operation strategies. Congress recognized this proactive enforcement strategy when it enacted the 1996 Illegal Immigration Reform and Immigrant Responsibility Act

(IIRIRA). Title 1, Subtitle A, Section 102 of the Act states that the Attorney General, in consultation with the Commissioner of INS[CBP], "...shall take such actions as may be necessary to install additional physical barriers and roads in the vicinity of the U.S. border to deter illegal crossings in areas of high illegal entry into the U.S." (Section 102(b)).

In response to this Congressional mandate and to the need to further control the border region, the San Diego Sector began plans to implement an enforcement zone that included a multi-tiered fence, patrol road, maintenance road, and various technologies such as lighting, sensors, and remote video surveillance (RVS) systems. Because of a lack of funding and the fact that the enforcement zone was the first of its kind, the initial segments of the 14-mile system were implemented as pilot projects. [See discussion of improvements in Areas II-IV, page 9-10.]

Initial success has already been realized in these general areas. ...

Today the USBP reports that staffing is now more balanced with the requirements of current levels of border activity. This has resulted in a reduced enforcement footprint, increased security for the industrial park, and other developed areas in Areas II, III, and IV, and a safe working environment for its employees. ...[T]otal crime[has] dropped by about 45 percent. Violent crimes, in particular murder, rape, and robbery, have been eliminated. However, if illegal border activity rates rise in the future, staffing will again be inadequate. Figure 1-5 [Exhibit 6] illustrates not only the reduction in assaults on USBP agents within the San Diego Sector since the implementation of the Border Infrastructure System project, but also that assaults are still a problem. In fact, since 2001 USBP agents from Imperial Beach Station, where the Border Infrastructure System has not been completed, have experienced a 17 percent increase in assaults. Without completion of the Border Infrastructure System, these assaults will continue and perhaps increase.

The CBP also believes enhanced border protection will benefit environmental values. The FEIS states:

Unless properly designed infrastructure "systems" provide rigid boundaries, deterrence-based operations will undoubtedly have a larger than necessary footprint because they will continue to rely on personnel deployments that saturate environments with various patrol resources (including ATV's, horse patrols, 4x4 vehicles, helicopters, infrared scope trucks, and foot patrols) whenever those locations are targeted by smugglers.

For example, the enforcement footprint for the area extending from the Pacific Ocean to about two miles east of the San Ysidro POE has historically encompassed a corridor that is about six miles wide (or about 30 square miles). Figure 1-6 [Exhibit 5] illustrates the primary entry routes in this area and the required enforcement zone. Apprehensions in this area in the mid-1990s represented nearly 30 percent of total arrests nationwide. Illegal entries have been estimated to average as high as 1,750 per night. The Imperial Beach Station estimates that they were successful in apprehending only one out of every three to seven illegal aliens or smugglers due to the terrain, major transportation routes, and concealment opportunities favoring their escape.

Driven by the high illegal traffic, the USBP had to maintain a road network that provided quick access to traditional illegal entry corridors. Many of the roads began as trails worn by illegal entrants and soon the network required to apprehend the illegal aliens developed into a series of hundreds of miles of unimproved roads. Trails and roads, however, are not the only impact illicit-trafficking has had on the local environment. Illegal entrants have destroyed habitat by cutting vegetation for shelter and fire, by causing accidental wildfires, by increasing erosion through repeated use of trails, and by discarding trash upon entry to the United States. ...

The creation of a primary enforcement zone composed of a dedicated system of infrastructure (multi-tiered fencing, lighting, cameras, and an all-weather road) that closely, but at a safe distance, parallels the border, reduces the geographic footprint of the operation and the environmental impact.

... Improving the border barrier infrastructure, both preceding and following the 1994 onset of Operation Gatekeeper, contributed to a marked decline in serious crimes along the border. The construction of primary fencing from 1991 through 1993 paralleled a 23 percent reduction in border crimes. ...

The completion of the Border Infrastructure System Project in the unfinished areas is required to reverse an increase in San Diego Border Corridor Crimes, recorded in these areas in the years 2001 and 2002. In the first six months of FY 2003 the San Diego Sector experienced a 20 percent increase in the number of illegal aliens apprehended. An ongoing survey of aliens apprehended by the USBP illustrates that nearly 18 percent of all aliens apprehended have serious/felony criminal records. Completion of the Border Infrastructure System is necessary to reverse these trends.

The life threatening work environment of USBP agents and border barrier maintenance personnel will vastly improve upon completion of this project. Treacherous roads that are now being used will be replaced. Three USBP agents and one road maintenance worker have lost their lives while performing their duties on these roads. Assaults on USBP agents have steadily declined commensurate with the amount of secondary

fencing constructed in the beginning phases. Assaults on USBP agents have steadily declined from a high of 287 in FY 1996 to 117 in FY 2002. Through the first six months of FY 2003, 54 assaults have occurred. However, assaults on USBP agents have increased in those areas where the Border Infrastructure System is not in place (Imperial Beach and Brown Field Stations). Completion of the Border Infrastructure System is necessary to save lives and ensure a safer work environment for all who work on the border.

D. Status of Local Coastal Program. The standard of review for federal consistency determinations is the policies of Chapter 3 of the Coastal Act, and not the Local Coastal Program (LCP) of the affected area. If the Commission certified the LCP and incorporated it into the California Coastal Management Program (CCMP), the LCP can provide guidance in applying Chapter 3 policies in light of local circumstances. If the Commission has not incorporated the LCP into the CCMP, it cannot guide the Commission's decision, but it can provide background information. The City of San Diego's LCP has been certified by the Commission and incorporated into the CCMP.

E. Federal Agency's Consistency Determination. The Bureau of Customs and Border Protection has determined the project to be consistent to the maximum extent practicable with the California Coastal Management Program.

F. Staff Recommendation: The staff recommends that the Commission adopt the following motion:

MOTION: I move that the Commission **concur** with consistency determination CD-063-03 that the project described therein is consistent to the maximum extent practicable with the enforceable policies of the California Coastal Management Program (CCMP).

STAFF RECOMMENDATION:

Staff recommends a **NO** vote on the motion. Failure of this motion will result in an objection to the determination and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

RESOLUTION TO OBJECT TO CONSISTENCY DETERMINATION:

The Commission hereby **objects** to the consistency determination made by the CBP for the proposed project, finding that: (1) the project is not consistent with the California Coastal Management Program; (2) the project is not consistent to the maximum extent practicable with

the California Coastal Management Program; and (3) the consistency determination for the proposed project does not supply sufficient information to determine the project's consistency with the California Coastal Management Program.

II. Applicable Legal Authorities. Section 307 of the Coastal Zone Management Act (CZMA) provides in part:

(c)(1)(A) Each Federal agency activity within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of approved State management programs.

A. Procedure if the Commission finds that the proposed activity is inconsistent with the CCMP.

Section 930.43(a) of the federal consistency regulations (15 CFR § 930.43(a)) requires that, if the Commission's objection is based on a finding that the proposed activity is inconsistent with the CCMP, the Commission must identify measures, if they exist, that would bring the project into conformance with the CCMP. That section states that:

(a) In the event the State agency objects to the Federal agency's consistency determination, the State agency shall accompany its response to the Federal agency with its reasons for the objection and supporting information. The State agency response shall describe: (1) How the proposed activity will be inconsistent with specific enforceable policies of the management program; and (2) The specific enforceable policies (including citations). (3) The State agency should also describe alternative measures (if they exist) which, if adopted by the Federal agency, would allow the activity to proceed in a manner consistent to the maximum extent practicable with the enforceable policies of the management program. Failure to describe alternatives does not affect the validity of the State agency's objection.

As described in Sections A-F of this report below, the proposed project is not consistent to the maximum extent practicable with the CCMP. Pursuant to the requirements of Section 930.43 of the federal regulations implementing the CZMA, the Commission is responsible for identifying measures, if they exist, that would bring the project into compliance with the CCMP to the maximum extent practicable. Assuming the informational deficiencies identified in the following procedural discussion in Section II. B below (and elaborated on in Sections III. A-G of this report) can be resolved, the Commission believes that it would be possible to bring this project into compliance with the CCMP to the maximum extent practicable if the CBP implements the following measures:

1. **Eliminate Smuggler's Gulch fill.** Replace the proposed Smuggler's Gulch cuts and fills with designs based on either of the switchback alternatives considered but rejected (preferably the single switchback alternative), or improve (i.e., resurface) the existing roads down the canyon slopes. For any of these alternatives, include secondary (and if necessary, tertiary) fencing north of the roads and/or along the northern toes of the canyon landforms and across the valley where the canyon walls flatten out.
2. **Sediment Controls in Smuggler's Gulch.** Design and incorporate adequate sediment controls (possibly including a sediment basin, if it can be designed in an environmentally benign manner) in Smuggler's Gulch to protect the Tijuana Estuary from construction and ongoing project-induced erosion from cut and fill slopes in this canyon. Add non-fill features at the canyon bottom as necessary (such as fences, lights, cameras, and sensors) to effectively secure the border.
3. **Eliminate Monument Mesa and Lichty Mesa Fencing.** Remove the proposed secondary fencing in these areas of Border Field State Park, relying instead on strengthened primary fencing in this project segment.
4. **Narrow corridor in Baja California birdbush habitat.** Narrow the project footprint in the area containing the Baja California birdbush (on the mesa east of Smuggler's Gulch), to minimize take of this species to the maximum degree possible.

[Note: The CBP has agreed to this measure in concept, stating that "narrowing the corridor on the mesa east of Smuggler's Gulch to the maximum extent practicable will continue to be a priority." However, the plans to implement this have not been provided; thus the Commission lack the necessary information to determine the adequacy of any such project revisions.]

5. **Increase Mitigation Ratios.** For habitat types in the coastal zone, increase the habitat mitigation ratios to 4:1 for coastal salt marsh (including disturbed coastal salt marsh), to 3:1 for disturbed maritime succulent scrub, to 3:1 for southern maritime chaparral, and to 3:1 for disturbed coastal sage scrub.

B. Necessary Information. Section 930.43(b) of the federal consistency regulations (15 CFR Section 930.43(b)) requires that, if the Commission's objection is based on a lack of information, the Commission must identify the information necessary for it to assess the project's consistency with the CCMP. That section states:

If the State agency's objection is based upon a finding that the Federal agency has failed to supply sufficient information, the State agency's response must describe the nature of the information requested and the necessity of having such information to

determine the consistency of the Federal agency activity with the enforceable policies of the management program.

As described fully in Section A-G of this report below, the Commission has found this consistency determination to lack the information that the Commission has requested the CBP to provide to enable the Commission to determine whether the proposed project is consistent to the maximum extent practicable with Sections 30240(a), 30231, 30233(a), 30236, 30210-30212, 30240(b), 30251, and 30253 of the Coastal Act. In order to determine the project's consistency with the CCMP, the Commission has requested the CBP to provide it with the following necessary information:

1. **Mitigation and monitoring plans.** The detailed mitigation and monitoring plans for habitat restoration for threatened, endangered and other rare species, revegetation of disturbed, cut, and fill slopes, abandoned road restoration efforts, and wetland restoration to offset wetland fill from the project. Plans should include baseline surveys to enable accurate pre- and post-project conditions, tables clearly depicting extents and locations of impact areas and mitigation areas, sufficient to show which impact is being mitigated where, more thorough monitoring (and for at least 5 years after the mitigation has been completed), and providing adequate success criteria.
2. **Revised project plans.** Revised project plans and alignments showing conceptually-agreed-to project changes for: (1) the west side of Monument Mesa; (2) the Baja California birdbush habitat east of Smuggler's Gulch; and (3) Lichty Mesa.
3. **Water quality plans.** The detailed water quality plans, including Best Management Practices for erosion and sedimentation controls, and reflecting in them the measures recommended by the Commission's water quality staff (and agreed to conceptually by CBP). These plans shall cover both the construction (i.e., Stormwater Pollution Prevention Plan (SWPPP)) and post-construction (i.e., Water Quality Control Plan (WQCP) phases.
4. **Geologic analyses.**
 - a) Analysis of the stability of the eastern wall of Smugglers Gulch, which would serve as the right abutment for the proposed fill slope carrying the BIS across Smugglers Gulch. This analysis should include identification of ancient slide surfaces (especially the way that they toe out beneath the canyon floor), documentation of shear strength parameters for the slide plane(s), and quantitative slope stability analyses for both static and pseudostatic conditions for the existing slope and for the slope after emplacement of the fill.

b) More thorough documentation of the adequacy of alluvium and soils in Smugglers Gulch to support a keyway for the large proposed fill slope at that location. Additional borings, and/or geophysical techniques should be used to more thoroughly map the distribution of alluvium types. Recommendations should be developed for any necessary remediation measures for any materials found to be unsuitable to support the vertical and lateral loads imposed by the fill slope.

5. Aesthetic plans. Final plans for any aesthetically treated fencing in Border Field State Park.

This information is needed to determine the project's consistency with the applicable policies are discussed in Sections A-G below. Specifically, the information is needed to fully analyze the project under the environmentally sensitive habitat (Section 30230), wetland fill (Section 30233(a)), stream alteration (Section 30236), public access and recreation (Section 30210-30212 and 30240(b)), water quality (30231), public views (30251), and geologic hazards (30253) policies of the Coastal Act.

C. Practicability. The federal consistency regulations implementing the CZMA include the following provision:

Section 930.32 Consistent to the maximum extent practicable.

(a)(1) The term “consistent to the maximum extent practicable” means fully consistent with the enforceable policies of management programs unless full consistency is prohibited by existing law applicable to the Federal agency.

The CBP contends that the proposed activity is consistent with the Coastal Act. However, in its consistency determination the CBP follows this assertion with the statement that “*In order to comply with this statute, some impacts to coastal resources are unavoidable.*” The CBP also states in the FEIS (p. 1-17) that: “*The statutory language of Subsection 102(b) directs construction in the coastal zone and makes no exception for wetlands or other sensitive environments.*”

In making these statements, the CBP appears to be arguing that either the project is fully consistent, or if not, the proposal meets the CZMA requirement that it be consistent to the maximum extent practicable because, in directing the CBP to construct the fence, road, and other improvements, existing federal law (i.e., IIRIRA) provides for a lesser standard to the degree that adverse environmental consequences stem from whatever improvements are needed in order to comply with IIRIRA.

Assuming, for the sake of argument, that this represents the CBP's line of reasoning, the question at hand becomes not whether the project is fully consistent (which, based on the analysis below in Sections A-G of this report, it is clearly not), but rather whether the Congressional requirements contained in IIRIRA compel the alternative the CBP has selected and the level of resource impacts associated with the current proposal. In numerous instances throughout its EIS and consistency determination, the CBP defends its proposal as the least damaging practicable alternative that meets the requirements of IIRIRA (and other applicable federal standards and regulations). The Commission notes that it is fairly clear that Congress did not insist on a particular design, location, fence height, and other project specifics, but rather left those details for the CBP to work out through its compliance with the applicable environmental review processes (e.g., CZMA, Endangered Species Act, NEPA, etc.).³ The Commission disagrees with CBP's assertions that it is proposing the least environmentally damaging practicable alternatives and that the project is consistent "to the maximum extent practicable" with the policies of the California Coastal Management Program (CCMP).⁴

The primary "requirements" that the IIRIRA specifies are broadly worded and direct the CBP to:

...provide for the construction along the 14 miles of the international land border of the U.S., starting at the Pacific Ocean and extending eastward, of second and third fences, in addition to the existing reinforced fence, and for roads between the fences, [and that the proposed project] ...shall incorporate such safety features into the design of the fence system as are necessary to ensure the well-being of border patrol agents deployed within or in near proximity to the system. [Emphasis added]

The Commission's findings (primarily in Sections III. A-F below) will elaborate on the reasons why the Commission believes that in several project segments, feasible and practicable less environmentally damaging alternatives are available which would meet the broad

³ The CBP characterizes this Congressional intent as follows:

Congress left the details of the final design for the infrastructure system to CBP/USBP because they possess the necessary law enforcement expertise and tactical experience, not so that they could develop the design details through compliance with environmental review processes. In fact, IIRIRA contains a provision authorizing the waiver of the Endangered Species Act of 1973 and the National Environmental Policy Act of 1969 to the extent that the Attorney General determines necessary to ensure the expeditious construction of the project. CBP/USBP elected not to request the Attorney General to invoke this waiver.

⁴ The fact that the CBP has determined it can meet its mission needs with only the primary fencing across the beach and across steep slopes on the east side of Bunker Hill is clear evidence that the IIRIRA did not mandate (and Congress did not intend) 14 continuous miles of border fencing and roads. If IIRIRA dictated fully continuous roads and fencing, the CBP could not have made these concessions. The CBP maintains, however, that "the Bunker Hill area is the only location along the 14-mile project corridor where enforcement and deterrence would not be substantially jeopardized by allowing a gap in the BIS."

provisions of IIRIRA and result in significantly fewer adverse effects on coastal resources. The CBP stresses the importance of the emphasis in the indented paragraph above and states:

The emphasis added here is extremely pertinent "...to ensure the wellbeing of border patrol agents..." The selection criteria contained this same language and were used in the decision making process, during which the switchbacks were eliminated and the road embankment slopes were designed.

The CBP further questions the Commission's ability to question its expertise over measures needed to ensure the wellbeing of border patrol agents, stating:

The statements in the EIS are based on many years of USBP experience in patrols, pursuits and apprehensions in this particular terrain, as well as in many other environmental and topographic conditions across the southwest border of the United States. CBP and USACE feel compelled to rely on USBP experience and successes in achieving the tactical objective rather than the experience of the Commission Staff when evaluating the practicability of specific project alternatives with regards to tactical concerns or the effectiveness of apprehension.

The Commission finds that the CBP's assertions are unconvincing, to the extent that, under any of these Commission-preferred alternatives, the CBP maintains that the safety and well-being of border patrol agents would be compromised. These alternatives include replacing the massive Smuggler's Gulch cuts and fills with either of the switchback alternatives considered but rejected (preferably the single switchback alternative, or, alternatively, improving the existing canyon side roads), use of a sediment basin in lieu of the fill at the bottom of Smuggler's Gulch (combined with other non-fill improvements), and removal of the proposed fencing in Lichty and Monument Mesas in Border Field State Park. The CBP has not adequately documented why these alternatives would compromise the safety and well-being of border patrol agents contrary to the requirements of the IIRIRA. Given the resource damage from the CBP's preferred alternatives in these project sections, it is incumbent that the CBP seriously consider these less environmentally damaging alternatives.

In conclusion, the CBP has at least inferentially raised the issue of practicability as defined in the CZMA regulations as possibly a lesser standard than full consistency based on the requirements of other federal law (IIRIRA). However, the Commission does not believe that Congress intended, or that the IIRIRA dictates, foreclosure of alternatives for the road and fence design that would substantially alleviate the significant adverse effects that the project as proposed by the CBP will have on the surrounding natural environment. Less damaging feasible alternatives are available which would meet the letter and spirit of IIRIRA, as well as conform more closely with the policies of the California Coastal Management Program (CCMP).

D. Federal Agency Response to Commission Objection. Section C(a)(i) of Chapter 11 of the CCMP requires federal agencies to inform the Commission of their response to a Commission objection. This section provides:

If the Coastal Commission finds that the Federal activity or development project ... is not consistent with the management program, and the federal agency disagrees and decides to go forward with the action, it will be expected to (a) advise the Coastal Commission in writing that the action is consistent, to the maximum extent practicable, with the coastal management program, and (b) set forth in detail the reasons for its decision. In the event the Coastal Commission seriously disagrees with the Federal agency's consistency determination, it may request that the Secretary of Commerce seek to mediate the serious disagreement as provided by Section 307(h) of the CZMA, or it may seek judicial review of the dispute.

The federal consistency regulations reflect a similar obligation; 15 CFR §930.43 provides:

State agency objection. ...

(d) In the event of an objection, Federal and State agencies should use the remaining portion of the 90-day notice period (see §930.36(b)) to attempt to resolve their differences. If resolution has not been reached at the end of the 90-day period, Federal agencies should consider using the dispute resolution mechanisms of this part and postponing final federal action until the problems have been resolved. At the end of the 90-day period the Federal agency shall not proceed with the activity over a State agency's objection unless: (1) the Federal agency has concluded that under the "consistent to the maximum extent practicable" standard described in section 930.32 consistency with the enforceable policies of the management program is prohibited by existing law applicable to the Federal agency and the Federal agency has clearly described, in writing, to the State agency the legal impediments to full consistency (See §§930.32(a) and 930.39(a)), or (2) the Federal agency has concluded that its proposed action is fully consistent with the enforceable policies of the management program, though the State agency objects.

(e) If a Federal agency decides to proceed with a Federal agency activity that is objected to by a State agency, or to follow an alternative suggested by the State agency, the Federal agency shall notify the State agency of its decision to proceed before the project commences.

III. Findings and Declarations:

The Commission finds and declares as follows:

A. Wetlands.

1. Coastal Act Policies. Section 30233 of the Coastal Act provides:

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In wetland areas only, entrance channels for new or expanded boating facilities ...

(4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(7) Restoration purposes.

(8) Nature study, aquaculture, or similar resource dependent activities.

Section 30121 of the Coastal Act defines a wetland as follows:

"Wetland" means lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.

In addition, Section 13577(b)(1) of the Commission's Administrative Regulations (Title 14, Division 5.5) provides:

Wetland shall be defined as land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deep-water habitats.

2. Wetland Delineations. The CBP performed wetland delineations, which were included in the FEIS and which identified ten wetland areas within the project corridor in Areas V and VI, primarily consisting of wetlands in stream corridors (such as Smuggler's Gulch, Goat Canyon, and Yogurt Canyon) and coastal salt marsh in Border Field State Park. The Commission staff advised the CBP in its DEIS comments that Coastal Act-defined wetlands may be more expansive than Army Corps-defined wetlands. The FEIS states:

Therefore, a wetland delineation was conducted within the project corridor in Areas I, V, and VI as part of this EIS. Wetland areas were delineated based on topographic position and did not necessarily follow the three-parameter approach dictated by the USACE. This approach would most closely follow the methods used by the California Coastal Commission, which require only one parameter (i.e., hydrology, hydric soils, or hydrophytic vegetation) to be present. Therefore, the wetland acreages presented in this document for Areas I, V, and VI are liberal in regards to USACE jurisdictional wetlands.

The CBP also states, in the Response to Comments:

INS[CBP] representatives met with the representatives from USFWS, EPA, NRCS, USACE, CDFG, and CCC in the field to discuss delineations of wetlands. The group agreed that the wetlands in these areas were all topographically driven and thus were easily defined by the toe of the slopes and/or stream channels. INS[CBP] conducted delineations, as described by 1987 Corps of Engineers Manual, so that the wetland forms can be used to document these areas during the Section 404 permit process. If

anything, INS[CBP] feels that the acreage of wetlands are over estimated and/or over valued. [Responses CCC-35.]

Starting with 13 potential wetlands (10 within the coastal zone), the CBP determined that 5 of these within the coastal zone qualified as wetlands; these habitat types include southern willow scrub and mulefat scrub communities, riparian habitat, and coastal salt marsh (see Biological Opinion, page 15).

3. Three-part Test. Because the project entails permanent fill in wetlands as defined under the Coastal Act, it triggers the 3-part test under Section 30233(a) for projects involving wetland fill: (a) the allowable use test; (b) the alternatives test; and (c) the mitigation test.

(a) Allowable Use Test. Under the first of these tests, a project must qualify as one of the eight stated uses allowed under Section 30233(a). The project qualifies as none of these uses and is inconsistent with the allowable use test. The Commission has considered minor expansions of existing roads in limited situations to qualify as “incidental public service purposes,” and thus allowable under Section 30233(a)(5), but only where no other alternative exists and the expansion is necessary to maintain existing traffic capacity.

The Court of Appeal has recognized this definition of incidental public service as a permissible interpretation of the Coastal Act. In the case of *Bolsa Chica Land Trust et al., v. The Superior Court of San Diego County* (1999) 71 Cal.App.4th 493, 517, the court found that:

... we accept Commission's interpretation of sections 30233 and 30240... In particular we note that under Commission's interpretation, incidental public services are limited to temporary disruptions and do not usually include permanent roadway expansions. Roadway expansions are permitted only when no other alternative exists and the expansion is necessary to maintain existing traffic capacity.

Thus, fill for the expansion of existing roadways may be considered to be an “incidental public service purpose” only if: (1) the expansion is limited; and (2) the expansion is necessary to maintain existing traffic capacity. The proposed involves new roads (and fences) along differing alignments than the existing dirt border patrol roads that crisscross the border area. While the Commission has generally considered the above limited situation applicable to an activity maintaining an existing road along its same alignment, the proposed project is not along the same alignment and could not be considered a limited expansion of an existing road. (The issue of traffic capacity is irrelevant as this is not a public road.) In addition, the project does not qualify as an allowable use as “restoration,” despite CBP contentions that habitat to the north of the border fence system may benefit to some degree through reductions in border crossings and border enforcement efforts. These claims are undocumented and speculative, whereas the project’s adverse effects on wetland, threatened and endangered, and other sensitive wildlife habitats are direct and significantly adverse. Filling a stream and canyon at

Smuggler's Gulch with 1.85 million cubic yards of material (and a total of 4.3 million cu. yds. of grading, counting cuts and fills) can not rationally be considered "restoration." The Commission therefore concludes that the project does not constitute an allowable use under any of the eight uses enumerated in Section 30233(a).

(b) Alternatives. In the FEIS the CBP analyzed three primary alternatives, with subcomponents separated by area within the two "build" alternatives. These three primary alternatives are the "No Project" alternative, the "Tactically Optimum Alternative," and the proposed "Multi-tiered Fence Alternative" (i.e., the Preferred Alternative).

The FEIS' stated that any alternative to be considered must meet the following selection criteria:

Alternative Selection Criteria

- Enforcement zone of 130 feet
- Secondary fence must be designed to impede illegal traffic
- Road platform should be less than 20% grade
- Fences should have minimal angles
- Alternative should reduce the current overall enforcement footprint
- Alignment/design should impact the minimal amount of land
- Provide safe operation 24 hours/day, 7 days/week
- Convey absolute certainty of apprehension
- Reduce risks to USBP agents
- Must comply with IIRIRA
- Maximize flexibility

The CBP rejected the "No Project" alternative (i.e., reliance on the existing primary fencing) as not meeting project objectives. The "Tactically Optimum Alternative" would maximize border defense effectiveness and essentially ignore environmental concerns, but would have had a wider (200-250 ft.) project footprint and included maximizing cuts and fills and a fence across Monument Mesa. The CBP therefore rejected this alternative as more environmentally damaging. For the proposed alternative (i.e., the Multi-tiered Fence Alternative), the CBP states it constitutes "... the least environmentally damaging design (i.e., alignment, construction method, road or fence type) that could be implemented without jeopardizing the effectiveness of the infrastructure components or hindering the operations of the USBP." This alternative involves a minimum width between the primary and secondary fence of 130 ft. (with greater width in steep terrain), a third fence generally 20 to 24 ft. from the second fence (but, in areas where large cut and fill activities, to be located at the northern edge of the cut/fill impact area). The segment where the proposed alternative deviates most extensively is in Smuggler's Gulch (Area V), where the CBP proposes to fill the entire width of the canyon. The canyon is 2,460 ft. wide and 310 ft. deep. The CBP considered several alternate designs

for this segment, including two switchback road alignments considered but eliminated from further evaluation for the reasons discussed on pages 33-35 (and reexamined in light of the previous Commission staff recommendation as shown in Exhibit 35).

The Commission disagrees with the CBP's rationale for the elimination of several of these alternatives and finds that feasible less environmentally damaging alternatives are available, feasible, and practicable. For example the CBP's recently submitted switchback analysis (Exhibit 35) shows 66% less wetland fill than the proposed project (e.g., 0.9 acres of wetland fill from the single switchback alternative, compared to 2.7 acres of wetland fill from the proposed fill), as well as significantly less grading (2.7 million cu. yds. of grading for the single switchback alternative, compared to 4.3 million cu.yds. of grading for the proposed project). Other (multiple) switchback alternatives involve greater amounts of grading but would still involve only 0.8 acres of wetland fill (with the exception of an alternative that includes a City-designed downstream sediment basin, which itself involves extensive wetland fill and which the Commission does not believe has been properly designed to minimize habitat impacts).

Thus, either of the switchback alternatives the CBP has rejected would result in smaller wetland impacts, and the Commission finds that at a minimum the single switchback alternative would be less environmentally damaging than the proposed 1.85 million cu. yds. fill of Smuggler's Gulch, would significantly reduce wetland fill in this canyon, and would reduce threats of downstream sedimentation into the Tijuana River National Estuary. The estuary is heavily threatened by sedimentation, and the CBP's claims that the project would reduce sedimentation are unsupportable because they do not consider realistic revegetation rates and do not consider cut slope sediment inputs, as discussed in the analysis on pages 54-58.

The CBP questions these assertions, stating that:

In response to the Commission's Staff Report and Recommendations, further detailed design and analysis of various switchback alternatives was conducted utilizing newer and more accurate digital topography and aerial mapping. The findings of this analysis (Appendix A to these comments) [Exhibit 35] further substantiate the conclusions reached in the EIS. The environmental impacts associated with the switchback alternatives that were eliminated from further consideration in the EIS are not far less environmentally damaging than the proposed action, but are in fact almost identical to those of the proposed action. However, since these alternatives did not satisfy the other selection criteria, including operational requirements and agent safety, they were eliminated from further consideration.

The Baker erosion and sedimentation study was reevaluated in light of the memo by PWA. The conclusion reached in the Baker study that the project will result in no net increase in sedimentation along Smuggler's Gulch and is likely to reduce the average

annual sediment yield from the proposed project footprint remain valid. Using the values recommended by PWA for vegetation cover, the soil loss analyses still result in an estimated decrease in sediment yields for the proposed condition. The allegation that the results of the erosion and sediment study are flawed because of a failure to consider the erosion on the project's cut slopes is not accurate.

The Commission is concerned that the project may increase sedimentation and adversely affect the estuary, even with erosion controls. [Staff Note: The Commission staff is still reviewing the revised sedimentation analysis (Exhibit 36), and will prepare an addendum prior to the hearing.]

Based on the selection criteria noted above, the CBP only considered the above 3 primary alternatives (No Project, Tactically Optimum, and Multi-tiered fence) as warranting detailed analysis in the FEIS. The FEIS rejected several other alternatives as "... failing to meet the project's operational imperatives and/or compliance with IIRIRA." These rejected alternatives include:

Primary Fence Only *One project alternative that was evaluated was to substantially improve (or fortify) the primary fence in lieu of additional fences in Areas I, V, and VI. In essence, this would be very similar to the No Action Alternative. In concept, this approach would minimize the project's direct footprint and impacts. After much consideration, however, the USBP has concluded that a project configuration lacking the secondary and tertiary fences cannot be made to function effectively.*

... Since this alternative would not create an effective enforcement zone, reduce the enforcement footprint, convey absolute detection and apprehension, allow flexibility in agent deployment, nor comply with IIRIRA, it was eliminated from further consideration.

Primary Fence in Area VI

An alternate design suggested by the USFWS and CDPR that was considered in Area VI was a single fence alignment from Bunker Hill to the Pacific Ocean. ... This alternative was eliminated from further consideration because of the increased impacts to the coastal marsh, the potential effects to the effectiveness of the overall Border Infrastructure System, and the fact that this alternative alignment would not satisfy the spirit and intent of IIRIRA.

Fence Only

Many of the perceived impacts of the Border Infrastructure System, as envisioned, stem from the need to provide an all-weather patrol road in association with the secondary and tertiary fences. In areas of rough terrain, the patrol road requires considerably more earthwork than would a simple fence foundation. As a result, the USBP has

evaluated the alternative to forego the road component in some project areas. ... [A] fence without an all-weather patrol road cannot be maintained or defended. Any such barrier would become a de facto primary fence located inside U.S. territory. Therefore, construction of the fence platform without a patrol road cannot meet project objectives. In fact, this approach simply shifts the current enforcement posture further north into the United States without significantly improving border security or reducing illegal traffic. As a result, alternative designs or alignments that include a multi-tiered fence without an adjacent patrol road have been eliminated from further consideration.

Secondary Fence Only

Alternative The Secondary Fence Only Alternative would consist of the same designs and alignment as the proposed action, except that it would not incorporate the tertiary fence. ... [I]t would not be in strict compliance with IIRIRA. There would not be significant differences in the types and magnitude of impacts associated with this alternative and Proposed Action Alternative. Thus, it was eliminated from further consideration during the preparation of the Final EIS.

Bridge Alternatives

The CBP noted that numerous commenters encouraged consideration of a bridge-type configuration, especially for Smuggler's Gulch. The CBP provided a design for such a bridge (Exhibit 8) but maintains that "...there would be no pragmatic purpose to such an endeavor" and that:

The fundamental flaw to a bridge configuration from an operational perspective is the lack of a secondary barrier. Illegal aliens and smugglers would be able to drive/walk/ride under the bridge. ... A conceptual plan for a bridge spanning Smuggler's Gulch was formulated in order to identify order of magnitude costs and environmental impacts for comparison with those of other alternative designs. ... Th[e] platform geometry is shown in Figure 2-13 [Exhibit 8], and results in minimum bridge height of 165 ft over the base of Smuggler's Gulch and over 1,950,000 cubic yards of earthwork.

The disturbance footprint for this bridge design would be about 83 acres. The disturbance associated with the bridge-only alternative is comparable to the disturbance for proposed embankment alternatives.

The cost of the bridge-only option for Smuggler's Gulch was estimated to be \$27.6 million or \$16.3 million if constructed by a general contractor or military units, respectively. This is roughly twice the cost of any of the embankment alternatives. In summary, the bridge alternative for Smugglers Gulch does not meet the project's minimum operational requirements, has no obvious environmental advantage, and was

projected to have the highest cost of any approach contemplated for Smuggler's Gulch. Based on this analysis, the bridge-only alternative was not considered further, in Smuggler's Gulch nor in any other location along the proposed project footprint. Bridges would not provide a barrier to illegal entrants and therefore would not fully comply with IIRIRA.

Switchbacks

Two alternative designs, primarily considered in Smuggler's Gulch, involving patrol road switchbacks were considered but eliminated from further evaluation. Switchback roads could be constructed in lieu of the earthen embankment. The current road system in Smuggler's Gulch is a switchback system; however, these roads are extremely steep; are experiencing severe erosion; are very dangerous, particularly after rains; and require an extended time to traverse from top to bottom. Therefore, the designs that were evaluated required major upgrades and new construction.

The FEIS presented two switchback designs: (1) a series of realigned switchbacks down the sides of Smuggler's Gulch (Exhibit 9); and (2) a single switchback at Smuggler's Gulch (Exhibit 10). The EIS rejected the first "multiple switchback" design as:

...extremely poor from a functionality standpoint due to the poor sight alignments associated with the switchbacks, the increased response time, additional maintenance required for roads, ... increased risks to vehicle and driver safety [; and decreased] ... clear line of sight, thus increasing risks to USBP agents by providing concealment opportunities to UDAs [undocumented aliens] who breach the primary fence.

The second switchback design would eliminate the multiple switchback problems and some of the operational and environmental problems associated with it (e.g., dangerous curves, large fills, habitat destruction, and line of sight issues). However it could enlarge the overall border enforcement footprint and a move to a more northerly location the second and third fences. The EIS rejected the first "multiple switchback" design for the following reasons:

A second design considered the use of a single switchback at Smuggler's Gulch, which attempted to mitigate the operational objections to the multiple switchback design by reducing the number of "turnbacks." The horizontal and vertical alignments for this alternate uses a single switchback with a 10 percent maximum grade to reach the base of Smuggler's Gulch from the east and west sides. This design resulted in a relatively small amount of embankment fill in the base of the canyon. However, the design required the patrol road to extend about 1,200 ft north of the border and the enforcement footprint would occupy all of Smuggler's Gulch (Figure 2-16 [Exhibit 10]). The road/fence platform geometry resulted in 1,319,644 cubic yards of earthwork

and a disturbance footprint of 143 acres. The costs to construct this alternative would be about \$13 million if a general contractor performed the work and about \$3.2 million if military units constructed it.

This approach was marginally better than the multiple switchback design but still creates a number of operational concerns. This design would also increase the response time and maintenance requirements. The expanded footprint would require more agents to be stationed in or near Smuggler's Gulch.

This alternative actually involves more earthwork and environmental disturbance than does the multiple switchback alternative. Additional real estate costs and impacts to private properties would also be incurred. Due to the lack of operational advantages and similar or increased effects to the natural and human environment, both switchback designs were eliminated from further consideration.

In its revised analysis (Exhibit 35), the CBP contends:

Conclusion *This analysis shows that the switchback alternatives are not far less environmentally damaging, as stated in the Commission Staff Report and Recommendation on Consistency Determination No. CD-063-03, but instead substantiates the conclusion in Section 2.3.4.2 of the EIS that the switchback alternatives have similar or increased effects to the natural and human environment when compared to the preferred alternative.*

a. Area of Disturbance. *The difference in total area of disturbance for each of the switchback alternatives, with the exception of the sediment basin (ALT-3), is insignificant when compared in percentage terms with the preferred alternative....*

b. Wetland Fill. *Although the switchback alternatives do not avoid wetland fill in the canyon, as stated in the Commission Staff Report, the extent of wetland fill is reduced by roughly 1/2, or 1.8 acres, when compared with the preferred alternative. Inclusion of a sediment basin (ALT-3) according to alternative measure no. 2 of the Commission Staff Report, however, increases the extent of wetland fill by approximately 80%, or 2.2 acres, when compared with the preferred alternative. This increase is due solely to the BIS platform and retention berm that provide containment of floodwaters for the sediment basin.*

The actual impacts to wetlands and biological resources associated with the sediment basin alternative (ALT-3) are significantly higher when compared with the proposed alternative. The entire basin area would have to be maintained clear of vegetation, sediment and debris in order for the basin to work properly. This alternative (ALT-3) would increase wetland impacts by approximately 22 acres, over the preferred

alternative. The cost to mitigate for wetland impacts on Phase I of the BIS project have averaged just over \$1 million per acre. Obviously, the costs associated with mitigating the impacts of the sediment basin preclude ALT-3 from being considered as a feasible alternative.

***c. Slope Surface Area.** The amount of manufactured slope (cut and fill) that is exposed to the detrimental effects of rainfall has a direct correlation to the potential for sediment being transported away from the project site. The quantification of slope surface area for each of the switchback alternatives and for the preferred alternative indicates that significant threats of downstream sedimentation into the Tijuana River National Estuary would likely not be reduced, as alleged in the Commission Staff Report, but would likely be increased by any of the switchback alternatives. The extent of erosion and sediment control (ESC) required for the switchback alternatives would likely be more than the preferred alternative due to the increase in slope surface area, but ESC monitoring and maintenance of some of the cut and fill slopes on the switchback alternatives would be more difficult due to limited access, and thus less likely to be effective. The cut and fill slopes (erosion source) on the switchback alternatives extend further north than the preferred alternative, which places them in closer proximity to the estuary, and therefore the potential for sediment delivery to the estuary would likely be higher.*

***d. Earthwork.** Fill volumes for all four of the switchback alternatives are significantly lower when compared with the preferred alternative. Cut volumes, on the other hand, increase with the multiple switchback alternatives, and only marginally decrease with the single switchback alternative. Excess (waste) soil significantly increases with all four switchback alternatives, and therefore the Government's costs to dispose of the excess material would increase proportionately.*

The Commission disagrees with CBP's characterization of the single switchback alternative as more environmentally damaging than the proposed project. This alternative would reduce both the amount of grading and the extent of wetland fill in Smuggler's Gulch.. As discussed above and in Exhibit 35, the CBP's switchback analysis shows 1.6 million cu. yds. (37%) less grading, and 1.8 fewer (66% less) acres of wetland fill from the single switchback alternative, compared to the proposed fill. It is also internally inconsistent for the CBP to assert that it can capture 100% of sedimentation from cut and fill slopes for the proposed project, at the same time it finds it difficult to capture sediment from a switchback alternative.

One of the issues raised by this project is the need distinction the CBP makes between Smuggler's Gulch and Bunker Hill, the first of which the CBP believes must be filled and fully fenced, and the second of which, in areas of steep terrain, it proposes a gap in the continuous

road and secondary fencing. The FEIS elaborates on why it believes it can patrol the Bunker Hill area (where it is not proposing roads and fencing, other than paving an existing dirt road), but no other area, such as Smuggler's Gulch), with primary fencing only, as follows:

A 3-dimensional topographic depiction of the eastern slope of Bunker Hill, as compared to the eastern slope of Smuggler's Gulch, is shown in Figure 2-18 [Exhibit 24] to illustrate the differences in the presence of arroyos/washes and thus opportunities to avoid detection and apprehension. The terrain also allows USBP agents to observe activities on the north, east, and west side slopes from one observation point on top of Bunker Hill, a capability that is not available at any other location along the 14-mile corridor. The vegetation composition and density at Bunker Hill and Smuggler's Gulch are also quite different. Vegetation on the slopes of Smuggler's Gulch consists of dense strands of large shrubs scattered along the numerous arroyos and washes. Conversely, the vegetation on Bunker Hill is comprised mostly of grassland with scattered sage shrubs (see Photograph 2-2 [Exhibit 24]).

The implementation of the sedimentation basins in Goat Canyon proposed by NOAA and Southwest Wetlands Interpretive Association (SWIA) would require a large area (22 acres) to be disturbed and maintained regularly, thus virtually eliminating vegetation and concealment opportunities and removing other enforcement obstacles (NOAA 2002). This expansive open area would effectively serve as an enforcement zone and physical deterrence. This combination of steep terrain with few and shallow arroyos/washes, low density vegetation, and presence of open, disturbed areas immediately north of the primary fence occurs only in this section of 14-mile project corridor. Therefore, the INS[CBP]/USBP believed this section, and only this section, could be eliminated and still allow the USBP to effectively enforce the area.

Thus, the CBP asserts it would not be able to effectively enforce the Smuggler's Gulch area under either of the switchback alternatives, due to poor lines of sight, higher vegetation than in Bunker Hill (where it is willing to forego the second fence), and the sediment basin proposed and approved for Goat Canyon, which would itself help block immigration. None of these arguments is compelling. The Commission believes the lines of sight from the high points above the canyon walls and the existing patrol roads down either side of the canyon, combined with the difficulty of escape due to the steep canyon walls, make the existing condition at Smuggler's Gulch as it is currently configured an ideal topography and situation for viewing and apprehending undocumented immigrants. The vegetation height difference between Bunker Hill and Smuggler's Gulch is not a meaningful concern for detection, as the extent of vegetation in the canyon large enough to provide cover for people attempting to elude capture in Smuggler's Gulch is quite small when compared with the large bare and unvegetated terrain persons must pass through to avoid detection. The hairpin turns in the existing dirt roads along the canyon walls could be paved and otherwise improved with safety features. Moreover, the improved switchback alternatives looked at (but rejected) would only improve the

effectiveness of apprehension and of safety for border agents driving the tight turns. Furthermore, like at Goat Canyon where the CBP claims a sediment basin itself helps serve as a deterrence to immigration, a sediment basin at the bottom of Smuggler's Gulch, *as an alternative to the large fill for the proposed road*, would similarly provide deterrence (and it could be fenced, lit, and otherwise designed to further bolster deterrence efforts).

The CBP questions the Commission's ability to second-guess its expertise over measures needed to ensure the wellbeing of border patrol agents, stating:

The statements in the EIS are based on many years of USBP experience in patrols, pursuits and apprehensions in this particular terrain, as well as in many other environmental and topographic conditions across the southwest border of the United States. CBP and USACE feel compelled to rely on USBP experience and successes in achieving the tactical objective rather than the experience of the Commission Staff when evaluating the practicability of specific project alternatives with regards to tactical concerns or the effectiveness of apprehension.

The Commission finds the CBP's assertions unconvincing that it could not effectively patrol the area with fairly minimal personnel under either of the switchback alternatives. The Commission also finds that the single switchback alternative would be practicable and less environmentally damaging than the proposed project because it would involve reduced wetland fill and less grading. For example, as discussed above, the CBP's switchback analysis shows 1.6 million cu. yds. (37%) less grading, and 1.8 fewer (66% less) acres of wetland fill from this alternative, compared to the proposed fill. The Commission concludes that the project is not the least environmentally damaging feasible or practicable alternative and that the project is therefore inconsistent with the alternatives test of Section 30233(a).

(c) Mitigation. The CBP has proposed wetland mitigation efforts to offset filled wetlands. The FEIS calculates the project would result in fill of 4.3 acres of wetlands in Area V (mostly in Smuggler's Gulch, but also including several ephemeral washes on Spooner's Mesa and the mesa east of Smuggler's Gulch), and 2.7 acres of wetlands in Area VI (coastal salt marsh, 2.4 acres of which the CBP considers to be "disturbed and of very low value"). The acreage of wetlands impacts has been refined in consultation with the U.S. Fish and Wildlife Service and the most accurate acreages are shown in Exhibit 11 (and in the Table on page 41).

The CBP's consistency determination states:

The impacts of the proposed activities on water resources are covered in detail in Section 4.3.9 in the 2003 FEIS. In summary, effects to surface water quality would be considered minimal and temporary. Implementation of the structure would impact 10 acres of waters of the U.S., including wetlands, under the preferred alignments (SG-1

and BHPO-4) within Areas V and VI, respectively. A total of 2.35 acres of disturbed and native coastal salt marsh would be impacted. Of this, 76% is considered highly degraded and of low quality and value.

To mitigate the project's wetland impacts, the FEIS states that mitigation ratios would be 2:1 for southern willow scrub impacts, 3:1 for mulefat scrub and coastal salt marsh, 1.5:1 for disturbed coastal salt marsh, 0.5:1 for tamarisk scrub, and 1:1 for waters of the U.S. Both the FEIS and the U.S. Fish and Wildlife Service Biological Opinion indicate that the wetland mitigation details will be developed through the U.S. Army Corps of Engineers Section 404 permit process (i.e., they have not yet been finalized).

Based on typically-required Commission wetland mitigation, these ratios are inadequate, as the Commission normally requires a 4:1 ratio, regardless of the level of disturbance of the existing wetland. Many Commission-issued coastal development permits⁵ have required a mitigation ratio of four to one to compensate for wetland acreage and functional capacity lost during the re-establishment and maturation of the mitigation area. In some cases, larger mitigation ratios have been required to ensure that at least some compensation occurs in the event the mitigation project is only partially successful. Enhancement of degraded habitat may be included as a component of a mitigation plan if the total package results in an acceptable mitigation ratio. Thus, the proposed mitigation ratios are inadequate and the project does not meet the mitigation test of Section 30233(a).

In addition, the CBP has not included any wetland mitigation location maps, planting plans, definition of success criteria, or monitoring plans. The CBP states:

Wetland mitigation plans will be finalized and approved in accordance with the Section 404 and 401 permitting provisions of the Clean Water Act prior to the start of construction. Approval by the appropriate regulatory agency will ensure the sufficiency of the final plans; therefore review of the final plans by the Commission Staff prior to a determination of consistency by the Commission should not be required.

In discussions with the Commission staff subsequent to this statement, the CBP has agreed to submit finalized plans to the Commission staff for its review and concurrence. However the CBP has not agreed to the increased ratios the Commission staff has requested, and in any event the Commission normally expects to be able to review these items prior to voting on a consistency determination. The Commission is therefore unable to find that it has sufficient information to determine whether the project satisfies the mitigation test of Section 30233(a).⁶

⁵ For specific examples see coastal development permit numbers 5-90-913, 5-92-408, 5-93-276, 6-86-2, 6-87-611, 6-87-667, 6-88-277, 6-88-388, 6-89-195, 6-90-219, 6-90-77.

⁶ Aside from proposed mitigation, the CBP also claims in the FEIS that the project would benefit wetlands (and other sensitive habitat) through the increased deterrence and/or elimination of

4. Conclusion. In conclusion, based on the above discussions, the Commission finds the project is not consistent to the maximum extent practicable with the allowable use, alternatives, and mitigation tests of Section 30233(a) of the Coastal Act, an enforceable policy of the CCMP, and, further that based on the lack of detailed mitigation and monitoring plans it has insufficient information to determine consistency with the mitigation test of Section 30233(a). Furthermore, for the reasons indicated above there are feasible, less environmentally damaging alternative project designs that would, if adopted by the CBP, be more consistent with the Coastal Act. Therefore, the Commission finds the project is not consistent to the maximum extent practicable with the enforceable policies of the CCMP.

B. Environmentally Sensitive Habitat.

1. Coastal Act Policies. Section 30240 of the Coastal Act provides:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

illegal foot and border patrol vehicle traffic from areas north of the tertiary fence, which could theoretically revegetate naturally and “regain the functional value as a coastal marsh, possibly up to 27 acres. The Commission: (1) notes that it is far from clear that these areas will revegetate naturally; (2) notes that without active efforts, revegetation is far more likely to occur by invasive rather than indigenous species; (3) notes that the CBP has not provided plans for active abandoned road revegetation efforts; and (4) questions why the CBP should receive “credit” for roads it has created in the first place. The CBP responds:

The USBP can show photos of the area, before and after the primary fence, which clearly demonstrate that natural re-vegetation can and has occurred. Credit for restoration of the abandoned roads has only been requested for those roads on public lands since there will be active restoration on these lands. Roads traversing the slopes and the mesa itself date to when Spooner’s Mesa was cultivated farmland, if not before.

In addition, Section 30107.5 defines “Environmentally sensitive area” as follows:

"Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

2. Project Impacts. The primary environmentally sensitive habitat area concerns in the coastal zone that the project raises consist of:

(a) losses of and takes of federally- and state-listed threatened and endangered species, including the least Bell’s vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax trailii extimus*) and the coastal California gnatcatcher (*Poliophtila californica californica*), the first two of which reside in of southern willow scrub and mulefat scrub habitat in Smuggler’s Gulch and the third residing in coastal sage scrub, maritime succulent scrub, and southern maritime chaparral habitats;⁷

(b) adverse effects on environmentally sensitive habitat areas that do not contain federally listed species, including: (i) habitat for the Baja California birdbush (*Ornithostaphylos oppositifolia*), for which the only occurrence in the U.S. is on the mesa east of Smuggler’s Gulch, and (ii) an extremely rare maritime succulent scrub vegetation community on Lichty Mesa);

(c) potential offsite effects on western snowy plover habitat along the beach area;

(d) coastal salt marsh and other wetland impacts (addressed in the preceding section of this report); and

(e) potential offsite sedimentation issues Tijuana River National Estuary, including adverse effects to federally listed species including the salt marsh bird’s-beak (*Cordylanthus maritimus* Nutt. ssp. *Maritimus*) and the light-footed clapper rail (*Rallus longirostris levipes*), (addressed in the water quality section of this report).

The project would also result in a net loss of 163 acres of lands set aside for the County-wide interagency Multiple Species Conservation Plan (MSCP) habitat preservation program, 104 acres of which would be within the coastal zone.

The FEIS elaborates that the Proposed Action would result in impacts to 92 acres of various habitat types in Area V and 33 acres in Area VI, refined in consultation with the Fish and

⁷ Note: Quino checkerspot butterfly (*Euphydryas editha quino*) habitat impacts would occur only outside the coastal zone, in Area 1, and will therefore not be addressed in this report.

Wildlife Service and broken down as shown in Table 1 (Exhibit 11 to this report) of the Biological Opinion (BO). For the coastal zone (Areas V and VI), the table documents:

Habitat Type	Size of Impact	
	Area V	Area VI
Coastal Sage Scrub (CSS)	16.4 acres	2.0 acres
Disturbed Coastal Sage Scrub (DCSS)	2.5 acres	0.6 acres
Native Grassland (NG)	0 acres	0 acres
Southern Willow Scrub (SWS)	0.67 acres	1.9 acres
Chaparral (Chap)	9.2 acres	0 acres
Mulefat Scrub (MFS)	2.2 acres	2.0 acres
Coastal Salt Marsh (CSM)	0 acres	1.0 acres
Disturbed Coastal Salt Marsh (DCSM)	0 acres	0.5 acres
Maritime Succulent Scrub (MSS)	3.7 acres	9.4 acres
Disturbed Maritime Suc. Scrub (DMSS)	0.1 acres	0.7 acres
Non-Native Woodland (NNW)	0.3 acres	0.5 acres
Ruderal (RUD)	12.2 acres	0 acres
Disturbed	42.4 acres	13.6 acres
Unvegetated Waters of the U.S. (WUS)	3.0 acres	0.1 acres

In terms of actual ‘take’ of federally listed species, the BO states that the project would result in:

1. take (in the form of harassment) of one pair of least bell’s vireo and one pair of southwestern willow flycatcher, as a result of removal of 2.57 acres of southern willow scrub and 4.2 acres of mulefat scrub;
2. take (in the form of harassment) of one pair of California gnatcatchers and one individual gnatcatcher, as a result of removal of 26.3 acres of coastal sage scrub, 9.3 acres of disturbed coastal sage scrub, and 9.2 acres of southern maritime chaparral; and
3. take of Quino checkerspot butterfly (outside the coastal zone) that is difficult to quantify.

3. Mitigation. The CBP’s consistency determination states that:

(1) the project would benefit environmentally sensitive habitat areas through its abandonment of up to approximately 100 miles of existing patrol roads;

(2) adverse effects on habitat occupied by the Federally endangered least Bell’s vireo and coastal California gnatcatcher would be mitigated within portions of the Tijuana River Valley Regional Park (in areas identified in the Framework Management Plan for the Regional Park as potential sites for future restoration and coordinated with the County of San Diego Planning Department);

(3) impacts to other sensitive species and habitats (e.g., Baja California birdbush and maritime succulent scrub) would be mitigated through restoration actions and/or land acquisition/transfer; and

(4) the CBP is not bound by the terms of the MSCP, but it nevertheless commits "... to transferring or preserving lands acquired as part of the Border Infrastructure System, as partial or full compensation required under the ESA or CWA. Transfer or preservation of these areas could benefit the MSCP."

The consistency determination notes that many of these issues are addressed in the U.S. Fish and Wildlife Service's Biological Opinion (contained in Appendix H of the FEIS, and mailed as an attachment to the Commissioners). The BO defines the types of mitigation/conservation measures to be employed. In addition, a conceptual mitigation plan is presented in Appendix G of the project FEIS. The BO primarily addresses project impacts on federally listed least Bell's vireo, coastal California gnatcatcher, Quino checkerspot butterfly, southwestern willow flycatcher habitat, and designated critical habitat for the gnatcatcher, Quino and vireo. The opinion: (1) concludes the project would include measures enabling it to avoid effects to the California least tern and western snowy plover; (2) assumes that wetland impacts will be addressed through the Corps of Engineers Section 404 permit; and (3) assumes that through Regional Water Quality Control Board review of the CBP's erosion controls and Stormwater Pollution Prevention Plan (SWPPP), the project would avoid effects from runoff on listed species in the Tijuana River National Estuary, including salt marsh bird's-beak and light-footed clapper rail.

As negotiated with the CBP, the BO contains various mitigation ratios (BO Table 2) (Exhibit 11), depending on habitat type, from 1:1 for disturbed and unvegetated areas, to 2:1 for southern mixed chaparral and disturbed maritime succulent scrub, and 3:1 for the rarer or higher quality habitat types. The total acreage affected for all project types is 96.3 (both in and out of the coastal zone), with a proposed replacement acreage of 231.6 (Exhibit 11). Table 3 of the BO (Exhibit 12) lists the mitigation strategies, indicating that coastal sage scrub and chaparral habitat will be mitigated in Spring Canyon (north of Area III, outside the coastal zone (Exhibit 19)), riparian habitat will be restored adjacent to the Tijuana River (location to be formalized with FWS (Exhibit 20)), maritime succulent scrub will be preserved on Lichty Mesa and restored on Spooner's Mesa (Exhibit 21), and wetlands/coastal salt marsh impacts will be mitigated through the Corps of Engineers Section 404 permit. The project would avoid impacts to snowy plovers, which nest at the beach at Border Field State Park, "due to CBP electing to tie the Border Infrastructure System into the existing primary fence on the western slope of Monument Mesa."

Regarding state-listed species, the FEIS states that up to 4,004 individual specimens of seven different state-listed species would be adversely affected in Smuggler's Gulch, Area V, and that the San Diego sunflower and barrel cactus would be the species most affected. In Area VI, 558 state-listed plants would be affected, primarily coastal agave and snake cholla.

The FEIS proposes two primary methods of offsetting impacts to protected species and wetlands: (a) land transfer/preservation and (b) restoration of disturbed lands. The FEIS notes:

It should be emphasized again that INS[CBP] is not statutorily required to compensate for upland habitats that are not occupied by Federally protected species or encompassed by designated critical habitat. Thus, the mitigation ratios presented previously in Table 5-2 are considered to be liberal, even though they might be below what is recommended in the MSCP or by the County of San Diego for commercial and private development.

(a) **Preservation**. The primary land transfer/preservation efforts would consist of transferring 145 acres of CBP-owned land near Spring Canyon (in Area III, which is outside the coastal zone)(Exhibit 19) to resource agencies (and for possible inclusion in the MSCP). These lands contain a large vernal pool complex as well as habitat that could be managed for gnatcatcher and Quino checkerspot butterfly habitat. A total of 110 acres of this land consists of disturbed and undisturbed coastal sage scrub and native grassland communities, and disturbed/barren lands, that would be counted as mitigation or compensation. The remaining 35 acres, which includes vernal pool complexes and riparian scrub communities, would not contribute to the compensation totals, since these communities are integrally connected to other mitigation programs. Of the 110 acres, 37 acres are disturbed and denuded areas that would have to be restored to coastal sage scrub prior to transfer or conservation of the lands. The CBP also expects that the entire parcel of private land on Lichty Mesa (Area VI), which would have to be purchased in full in order to construct the Border Infrastructure System, but only 5 acres of which are needed for the project, would enable it to transfer the remaining 9.6 acres for additional compensation. These lands contain maritime succulent scrub (4 acres) and disturbed and undisturbed coastal salt marsh (5.6 acres) communities.

(b) **Restoration**. Restoration efforts would consist of abandoning, and possibly re-vegetating, approximately 42 miles of roads in the Spring Canyon Area (Area III, again, outside the coastal zone), and 43 miles of roads in Areas I, IV and VI. Revegetation would be contingent on receiving landowner permission. Up to about 145 acres of bare ground could be converted to coastal sage scrub and grassland habitat, which would eliminate much of the habitat fragmentation that has resulted from these roads. More roads could be abandoned/re-vegetated in the future as operational needs are reassessed (again, contingent on receiving landowner permission). About 16 miles (24 acres) of roads are on public lands and the CBP states it is "... confident that these roads could be restored to coastal sage scrub and maritime

succulent scrub upon completion of the Border Infrastructure System.” The roads which would be abandoned are presented in Figures 5-2 through 5-4 (Exhibit 18). The CBP also proposes:

- restoring additional lands on Spooner’s Mesa to maritime succulent scrub and maritime chaparral;
- restoring an 18-acre site parallel to and south of the Tijuana River to compensate for the losses of mulefat scrub and southern willow scrub communities;
- coordinating with the Bureau of Land Management to conduct a noxious weed eradication program along patrol roads within the Otay Wilderness Area and surrounding BLM lands; and
- revegetating the slopes on the north side of the Border Infrastructure System with native species.

Additional avoidance and mitigation commitments include:

- conducting pre-construction surveys for migratory birds;
- salvaging and relocating affected specimens of Baja California birdbush to areas north of the project area and/or to the CBP mitigation site;
- limiting lighting to special lamps producing a maximum of 0.1 foot candles of light at the northern toe of the maintenance road which the CBP maintains is similar to a bright moonlight condition; and
- noise abatement (either through avoidance during sensitive periods) or noise barriers.

In addition to these measures, the CBP relies on the Fish and Wildlife Service BO, which provides additional details about project impacts, mitigation and monitoring measures, and additionally recommended (but not required) conservation measures.

The 33 required conservation measures under the BO expand on the CBP’s commitments listed above; these measures are attached as Exhibit 13. The BO further requires “Reasonable and Prudent Measures” and “Terms and Conditions” requiring the establishment of baseline conditions and detailed management, monitoring, and reporting measures (which are shown in Exhibit 14). The BO also provides for reinitiation of consultation in the event a greater level of adverse effects to listed species occurs, as well a list of “conservation recommendations,” which are not binding on CBP (Exhibit 15). Concerning these conservation recommendations, the CBP states:

A decision regarding the implementation of one or more of the Conservation Recommendations contained in the Biological Opinion (1-6-03-F-1089.22) has not been made by the proponent agency to date. It is not likely that such a decision will be made in the near future due to the state of flux in the new Department of Homeland Security.

4. Commission Analysis – Allowable Use. The project is located within a number of environmentally sensitive habitat areas (based on the Coastal Act definition - Section 30107.5, page 40) in the coastal zone, including: (1) southern willow scrub, mulefat scrub, coastal sage scrub, maritime succulent scrub, and southern maritime chaparral, which include federally- and state-listed threatened and endangered species (least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax trailii eximius*) and coastal California gnatcatcher (*Polioptila californica californica*); (2) wetlands in various locations (see page 28 and 37), including coastal salt marsh habitat in Border Field State Park; (3) habitat for the Baja California birdbush (*Ornithostaphylos oppositifolia*), for which the only occurrence in the U.S. is on the mesa east of Smuggler's Gulch; and (4) an extremely rare maritime succulent scrub vegetation community on Lichty Mesa. As discussed further in Exhibit 32 (9/25/03 CCC staff biologist ESHA Memo), these habitats all qualify as environmentally sensitive habitat areas. Section 30240 only allows "uses dependent on the resources" to be sited within environmentally sensitive habitat areas, and the Commission finds the project is not a use dependent on these resources. Thus, notwithstanding the conceptual mitigation measures included in the Fish and Wildlife Service's BO, the Commission cannot find the project consistent with Section 30240(a), due to the allowable use test. Moreover, the mitigation and monitoring plans prepared to date are incomplete, and the Commission does not have enough information to determine these species would be protected from significant disruption as also required under Section 30240(a). In addition, the BO does not assure protect for environmentally sensitive habitat areas (as defined in the Coastal Act) that do not contain federally listed species.

For example, the CBP notes that its project would affect 46% (47 out of 103) of the entire U.S. population of the Baja California birdbush species, located on the unnamed mesa east of Smuggler's Gulch. While additional populations occur in Mexico, the California Native Plant Society (Inventory of Rare and Endangered Vascular Plants of California) considers this species endangered throughout its range (i.e., not just in the U.S.) To attempt to offset this impact, the CBP has included a conceptual salvage and transplant plan which is incomplete, and, moreover, has an unlikely and, at best, unknown chance of success. San Diego County notes:

Translocation of the Baja California birdbush is an unproven action. Transplantation actions for members of the Ericaceae are notorious for failure due to the sensitivity of the roots and associated soil mycorrhiza. The Biological Opinion states that this transplantation is not a statutory requirement but it also states that not performing the

transplantation could lead to the possible listing of this species in the future. This population that is going to be significantly reduced by this project is the only population of this species in the United States. The project itself when considering the unproven and unlikely success of transplantation will in fact bring the species to near extinction in the United States.

Given this concern, the Commission finds that the proposed road and fences resulting in take of 46% of this species (in the U.S.) constitutes development within an environmentally sensitive habitat area that is inconsistent with Section 30240 of the Coastal Act, because it is not a use dependent upon the resources of the environmentally sensitive habitat area, and it would not would protect the resource from significant disruption of its habitat values.

Concerning additional environmentally sensitive habitat areas that do not include federally listed species, a sensitive and unique vegetation community occurs on Lichty Mesa which is one of the few (if not the only) undisturbed coastal mesas in San Diego containing rare vegetation communities that could not be replicated further inland at Spring Canyon (the site of the bulk of the proposed restoration efforts). The Commission finds that the CBP's proposal to cap the mesa with the proposed road and fence improvements would result in extensive landform alteration and vegetation destruction on this mesa. This too would constitute development within an environmentally sensitive habitat area that is inconsistent with Section 30240 of the Coastal Act because it is not a use dependent upon the resources of the environmentally sensitive habitat area, and because it not would protect these rare and valuable habitat resources from significant disruption of their habitat values.

5. Commission Analysis – Alternatives. The Commission further finds that less damaging feasible and practicable alternatives exist which would reduce adverse effects on these environmentally sensitive habitat areas. As discussed in the previous (Wetlands) section of this report, any of several alternatives which would reduce the extent of fill in Smuggler's Gulch would not only address wetland concerns, but other environmentally sensitive habitat concerns as well (e.g., least Bell's vireo and southwestern willow flycatcher). Adding a properly located and designed sediment basin in Smuggler's Gulch⁸ would also help protect the Tijuana Estuary from construction and ongoing project-induced erosion from cut and fill slopes in this canyon, some of which would occur even if the proposed canyon fill is eliminated, due to earthwork on the canyon side slopes. Narrowing the project footprint on the mesa east of Smuggler's Gulch, in the area containing the Baja California birdbush habitat, would lessen adverse effects on that species. Concerning the previous staff recommendation that the CBP consider the alternative of eliminating capping at Lichty Mesa, the CBP states:

⁸ The Commission does not believe the City-designed sediment basin analyzed in the CBP's most recent submittal is the most environmentally beneficial design or location for such a basin in Smuggler's Gulch.

Eliminating the proposed capping would result in direct impacts to cultural resources and necessitate that the archeological site on the mesa be mitigated by excavation. Native American tribal representatives have remained adamant throughout our coordination efforts pursuant to Section 106 of the National Historic Preservation Act, that the cultural resources on Lichty Mesa be capped prior to constructing the proposed infrastructure in order to ensure that impacts to the archeological site are avoided. Due to the size of the archeological site on the mesa, excavating the site would undoubtedly result in vegetation destruction to a greater extent than that required for the proposed action. Furthermore, use of the existing disturbed roads, as suggested by the Commission Staff, would necessitate widening of the existing roadway to accommodate the typical 70' wide footprint for the all-weather patrol road, secondary fence and maintenance road. Impacts to the vegetation communities on Lichty Mesa are unavoidable under both alternatives. The proposed action is less damaging the Commission Staff's preferred alternative.

The Commission understands and agrees that impacts to the vegetation communities on Lichty Mesa are unavoidable under any scenario for a new road, regardless of whether the cap is included or excluded (and that, for archaeological resource protection purposes the cap would appear to be preferable). In addition, the CBP has indicated it will revise the capping alignment on the mesa in a manner which will hopefully decrease the project's impacts. However, that realigned alternative has not been presented to date, and the Commission remains unconvinced that, given the proximity of the two mesas to each other, as well as the lack of any vegetation offering hiding opportunities on Lichty Mesa, the CBP could not effectively patrol Lichty Mesa without any new roads, under the same concept it has agreed to for the west side of Monument Mesa and the beach (i.e., with either only a single fence on Lichty Mesa, or a second fence paralleling the existing roadbed across the mesa). As stated above the CBP contends that such an alternative would be less protective of habitat resources because it would result in increased levels of habitat-disturbing illegal immigration and apprehension activities. This is a difficult issue to resolve with certainty; nevertheless the Commission believes the more appropriate approach would be to refrain from building a new road on the mesa, but instead fortify the primary fence, and if necessary, add secondary fencing along the north side of the existing dirt road on the mesa, and document that adverse resource habitat and/or cultural resource impacts are continuing prior to proposing capping the mesa.

6. Commission Analysis – Mitigation. In terms of the adequacy of the mitigation ratios worked out with the U.S. Fish and Wildlife Service (Exhibit 11), the ratios in several instances are less than typically required by the Commission through coastal development permit, Local Coastal Program, and federal consistency reviews. For habitat types in the coastal zone, the Commission believes for the ratios to be adequate the CBP needs to increase the habitat mitigation ratio to 4:1 for coastal salt marsh (including disturbed coastal salt marsh), to 3:1 for disturbed maritime succulent scrub, to 3:1 for Southern Maritime Chaparral, and to

3:1 for disturbed coastal sage scrub.⁹ Finally, for all the habitat restoration plans, the Commission also needs to review final mitigation and monitoring plans for habitat restoration for threatened and endangered and other sensitive species, revegetation of disturbed, cut, and fill slopes, and any abandoned road restoration efforts for which the CBP seeks habitat mitigation credit. The Commission finds that the plans prepared to date are incomplete, lack accurate determination of baseline (pre-project) conditions, tables clearly depicting extents and locations of impact areas and mitigation areas, thorough monitoring efforts (e.g., for at least 5 years after the mitigation has been implemented), and adequate definitions of success criteria.

7. Commission Analysis - MSCP Lands. Concerning the elimination of 88 acres of MSCP lands in Area V, and 16 acres in Area VI, the Commission notes that the MSCP is one of two subregional plans in San Diego County and was prepared to implement the state-wide Natural Communities Conservation Program (NCCP). The NCCP was developed to streamline the permitting process and to facilitate a regional approach to habitat conservation. The MSCP includes central and southern San Diego County while the Multiple Habitat Conservation Program (MHCP) includes portions of northern San Diego County. Each subregional plan includes a proposed habitat preserve. Within the MSCP, a biological preserve, known as the Multiple Habitat Planning Area (MHPA), has been established by the City of San Diego in cooperation with the U.S. Fish and Wildlife Service and the California Department of Fish and Game.

The FEIS states:

The INS[CBP]/USBP did not participate in the development of this valuable program and thus was not a signatory partner. Although the INS[CBP]/USBP have made every attempt to reduce the effects on MSCP lands, while satisfying the stated purpose and need as well as IIRIRA. There is no statutory requirement for the INS[CBP] to comply with the mitigation conditions specified in the MSCP. Consequently, there is a potential that INS[CBP]'s lack of participation in the MSCP could affect or influence other Federal, state, and local agencies' future participation as well. INS[CBP] has stated its intentions, however, to preserve or transfer approximately 145 acres in the Spring Canyon area to a conservation agency upon completion of the Border Infrastructure System as partial mitigation for protected species. These lands are included in the MSCP and could be used as such by the receiving agency.

The primary concern over this commitment is that the lands proposed for “mitigation” are already enrolled in the MSCP program, such that the CBP is not adding to the program. The CBP’s contention that it was not a signatory to the program and is therefore statutorily exempt from its requirements undermines the integrity of the entire program. The Commission is

⁹ Concerning previous Commission staff specific recommendations for modifying and clarifying the Baja California birdbush salvage plan (i.e., avoiding replantings on new fill slopes and using properly sized equipment), the CBP has agreed to these changes.

concerned over the effects of these losses on the integrity of the program and believes CBP should avoid diminishing the habitat acreage and values of lands enrolled in the program. The Commission *urges, in the strongest terms possible*, that the CBP replace at least the 104 acres of MSCP lands (88 acres in Area V, and 16 acres in Area VI) being lost to the program in the coastal zone, if not the entire acreage (i.e., 163.6 acres) by purchasing and dedicating to an appropriate public agency equivalent acreage and quality of lands not now enrolled in the program (replacement lands may be either inside or outside the coastal zone), to be added to the lands protected under the MSCP program such that there is no net loss to the program. The Commission notes that the Fish and Wildlife Service has made a similar recommendation in its BO (p. 58)(and Exhibit 15), when it noted:

Loss of MHPA land is of particular concern since it was the conservation and management of these lands that justified the coverage of the gnatcatcher, vireo and flycatcher, as well as the other 82 species included on the covered species list. The INS[CBP] proposes to offset impacts from the BIS project by restoring habitat on approximately 145 acres of land in Spring Canyon. In addition, the BA (INS[CBP] 2002c) states that INS[CBP] is considering closure and restoration of approximately 200 miles of roads throughout the project area. The proposed restoration may offset some of this loss, by increasing the biological value of MHPA preserve lands. However, much of this area lies wholly within the MHPA, therefore it would not fully offset the loss of 163.6 acres of the MHPA preserve. In addition, INS[CBP] has not fully determined how it will implement these conceptual proposals, therefore we can not determine the overall effects of the project on MSCP. The service will continue to work with the INS[CBP] to increase the acreage of lands in the MHPA.

8. Commission Conclusion. Based on the above discussions, information, consultation results, conceptual plans, and commitments, the Commission concludes that the project is inconsistent with Section 30240 because: (1) it is not a use which is dependent upon the resources of the environmentally sensitive habitat areas in which it is proposed; (2) it would not protect environmentally sensitive habitat areas against significant disruption of habitat values; (3) it is located not only in but adjacent to environmentally sensitive habitat areas but has not been sited and designed to prevent impacts which would significantly degrade those areas, and would not be compatible with the continuance of those habitat areas; (4) it provides for inadequate mitigation ratios for several habitat types (particularly disturbed habitat areas, southern maritime chaparral, and coastal salt marsh); (5) it does not provide mitigation for environmentally sensitive habitat impacts that do not contain federally listed species (including the Baja California birdbush and extremely rare maritime succulent scrub vegetation communities on Lichty Mesa); and (6) as discussed in the wetland (alternatives) section above and the water quality section below, it is likely to increase erosion and sedimentation, potentially threatening listed species in the Tijuana River National Estuary. The Commission further concludes that due to the draft, conceptual, and incomplete nature of the mitigation and

monitoring plans for habitat restoration, the Commission lacks sufficient information to determine at this time whether any of the proposed mitigation plans would mitigate habitat impacts.

Finally, for purposes of discussion (for example, if the CBP were to assert that while full consistency with Section 30240 is not achievable, the project is still consistent to the maximum extent practicable with Section 30240), and as discussed above (page 46-47) and in the preceding section of this report (in the wetlands/alternatives discussion), the Commission finds that feasible and practicable less environmentally damaging alternatives are available (in particular for Smuggler's Gulch, Lichty Mesa, Border Field State Park, and the unnamed mesa east of Smuggler's Gulch) that would more closely enable a determination that the proposal could protect the environmentally sensitive habitat area resources to the maximum extent practicable from significant disruption of its habitat values.

C. Water Quality. Section 30231 of the Coastal Act provides:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

The Tijuana River National Estuarine Research Reserve (TRNERR) encompasses approximately 2,531 acres of tidally flushed wetlands, riparian and upland habitats extending north from the international border to Imperial Beach Boulevard and the Naval Air Station. It is bounded on the west by the Pacific Ocean shoreline and Seacoast Drive and on the far east by Saturn Boulevard. Established in 1982 by the National Oceanographic and Atmospheric Administration (NOAA), the Research Reserve consists of the Tijuana Slough National Wildlife Refuge, Border Field State Park, Navy lands, San Diego County property and San Diego City property. The Reserve is managed cooperatively by the U.S. Fish and Wildlife Service and California State Parks (DPR).

National estuarine research reserves are areas set aside for long-term research, education and interpretation. The TRNERR is one of 25 estuarine reserves in the country devoted to education and research and is one of the two intact estuaries in southern California. The estuary provides productive marsh habitat for invertebrates, fish and birds, plants. Several endangered and threatened plant and animal species are sheltered within the Reserve, including the light-footed clapper rail, California least tern, and salt marsh bird's beak. The Tijuana River National Estuarine Research Reserve (TNERR) Management Plan (1999) governs planned

activities and development within the estuary boundaries to ensure its preservation as a research and interpretive resource. One of the most serious concerns for the TNERR, a unique and internationally known estuary with outstanding habitat values, is the continual threats from sewage and sedimentation from upstream lands and waters. Major public efforts and many millions of public dollars of expenditures have been spent on sewage treatment and sediment removal within and upstream of the estuary. The predominant effects have originated in Mexico, which comprises about 70% of the 1,731 sq. mi. watershed of the Tijuana River, but significant inputs also occur from agricultural practices and Border Patrol efforts in the U.S. Major improvement efforts have included construction of the International Wastewater Treatment Plant (IWTP) located east of Smuggler's Gulch, construction of an ocean outfall offshore of Imperial Beach, and the proposed construction of the Goat Canyon Sediment Basin.

The FEIS notes that the project would directly and indirectly impact soils, including direct alteration of 33 acres in Area VI and 93 acres in Area V. The FEIS also notes the potential for increased soil erosion during construction due to an increase in surface runoff, and that several soil associations are present that require special engineering designs and construction methods; the FEIS states: "According to the USDA (1973), all the soils located within Area V are considered to have high erosion rates, fair to poor suitability for road fill activities, and have severe engineering limitations for road location (except for the Carlsbad soil)." The CBP believes it can engineer around these constraints, and that revegetation and erosion controls would minimize adverse effects, stating:

The FEIS states that runoff would be captured by storm drainage, thus minimizing the potential for soil erosion. In addition, compaction techniques and erosion control measures such as jute fiber, stilling basins, waterbars, gravel bags, gabions, straw bales, and re-seeding would be implemented to alleviate these situations, as described in Section 2. A SWPPP would be required since the area of impact would be greater than one acre. ...

Construction methods that would be implemented to ensure slope stability and erosion control would include, but are not limited to, over excavation and backfill, compaction using thinner layers (lifts), revetments, and terraces.

The CBP's consistency determination states:

There is a potential for increased soil erosion during construction due to an increase in surface runoff; however, runoff would be captured by storm drainage minimizing the potential for soil erosion. As mentioned above, completion of the Border Infrastructure System would reduce the annual sediment loads being generated within the project corridor by 27%. In addition, compaction techniques and erosion control measures such as waterbars, gabions, straw bales and reseeded would be implemented to alleviate these situations during the construction period. These areas should be

converted back to their natural condition upon completion of the project to help reduce the potential of soil erosion. A Stormwater Pollution Prevention Plan (SWPPP) would be required since the area of impact would be greater than one acre.

The CBP elaborates with the following commitments in the FEIS:

BMPs, that would be implemented during the construction phase include, but are not limited to the following measures:

- 1. The limits of fill-and-cut slopes shall be field surveyed and staked prior to construction.*
- 2. Separate and stockpile topsoil for re-application.*
- 3. Schedule major construction during the dry season when erosion potential is low.*
- 4. Minimize the size of exposed area and the length of time of exposure through construction phasing, seeding and mulching.*
- 5. Roughen finished slope surfaces to aid infiltration and thus reduce erosion. Methods to roughen include texturing with heavy equipment such as sheepfoot roller, and ripping and tilling perpendicular to the slope with ripper bars.*
- 6. Trap sediment before it leaves the construction site by using silt fences, straw bales and temporary stilling basins.*

The final engineering designs and SWPPP will identify specific measures/designs to be constructed that will provide permanent control of erosion and sedimentation to assure that the proposed action does not add to the existing problem of sedimentation in the Tijuana estuary or degrade downstream water quality. Permanent erosion control features that will be incorporated to the design will include, but are not limited to:

- 1. Apply jute fabric bonded fiber matrix, or other types of slope stabilization materials, on slope to hold soil, reduce impact of raindrops on soil material, hold seeds in place for germination and maintain soil moisture. The preferred cover shall be natural product, such as jute, so that it will degrade into the soil matrix.*
- 2. Apply stockpiled native topsoil to finished slopes.*
- 3. Seed the slopes with native vegetation before rainfall season.*
- 4. Construct terraces or benches on steep and long slopes. Provide swale within the benches and line with riprap to slow water velocity and create energy dissipation.*
These swales should be directed to downdrains or rock-lined spillways to convey the storm water down slope in a safe and controlled manner to prevent slope erosion by concentrated flows.

- 5. Collect and direct runoff from top of slopes away from slope surfaces by using embankment curbs, spillways and downdrains. Provide energy dissipaters at the outlet of downdrains and spillways.*
- 6. Provide sedimentation basins at toe of slopes to intercept and trap sediment before it leaves the project footprint. Maintenance of the sedimentation basin shall be the responsibility of the USBP and shall be accomplished on an as-needed basis, but not less than annually, to ensure that the basin will function properly.*

Revegetation efforts would be needed to ensure long-term recovery of the area and to prevent significant soil erosion problems. The use of native seeds and plants to assist in the conservation and enhancement of protected species would be considered, as required by Section 7(a)(1) of the ESA. Borrow materials, if required, would be obtained from established borrow pits or from approved on-site sources within the project footprint.

The Commission staff has provided the CBP with a number of construction and post-construction water quality features it believes are necessary (Exhibit 26), and the CBP has responded that it does expect to include these in its Storm Water Pollution Prevention Plan (SWPPP) and site-specific Water Quality Control Plans (WQCPs). The Commission appreciates this response but nevertheless has several water quality concerns over the CBP's proposal. The first is that the water quality plans have not been finalized and are incomplete. The second is that the Commission has serious questions over the CBP's optimism in its ability to revegetate steep slopes in areas with serious erosion problems and extremely difficult revegetation conditions. The third, which in part is a combination of the first two, is that the CBP appears to have underestimated the potential for downstream sedimentation impacts. These three concerns will be addressed in more detail in the following paragraphs.

While the CBP has agreed in concept to include measures recommended by the Commission staff, without specific details the Commission is unable to evaluate their effectiveness. For example, to assess the likelihood of impact of the project even with BMP's recommended by the Commission staff, the Commission needs to be able to review construction-phase measures such as: (1) nutrient management measures; (2) grading schedules; (3) identified structural BMPs clearly labeled on project plans; and (4) a narrative description for all proposed BMPs. For post-construction measures, the Commission needs to be able to review: (1) clearly described (and labeled on the project plans) BMPs to treat or infiltrate runoff from impervious surfaces (i.e., patrol and maintenance roads) and to discharge the runoff in a manner that avoids erosion, gullyng on or downslope of the subject site, discharge of pollutants (e.g., oil, heavy metals, toxics) to surface waters or drainage courses; (2) impervious surface runoff conveyance and treatment measures and demonstrated calculations (including meeting a guideline that they treat or infiltrate the amount of stormwater runoff produced by all storms up to and including the 85th percentile, 24-hour storm event for volume-based BMPs, and/or the

85th percentile, 1-hour storm event, with an appropriate safety factor (i.e., 2 or greater), for flow-based BMPs); (3) clearly described (and labeled project plans) BMPs to prevent and control erosion and sedimentation from the surface of embankment and cut slopes; (4) short- and long-term revegetation (with native plants) and monitoring plans; and (5) a long-term plan and schedule for the monitoring and maintenance of all structural stormwater BMPs. Without these details, the Commission lacks sufficient information to determine the project's consistency with Section 30231 of the Coastal Act.

In addition, the Commission staff has contacted habitat restoration specialists who have experience working in this region and who confirm comments made by numerous agencies on the DEIS that revegetation in these types of soils is extremely complex and would take a minimum of 3 years to achieve, even if all possible efforts are undertaken successfully. The CBP contends:

... the slopes used in the quarry restoration within Goat Canyon were of similar steepness and re-vegetation efforts were successful. Reference comment nos. 2, 35 and Appendix B regarding the results of the erosion and sediment study for Smuggler's Gulch.

The Coastal Conservancy has stated:

The effort to establish coastal sage scrub on steep slopes at the reclaimed quarry site at Goat Canyon continues three years after installation. The project has yet to meet the requirements for % cover established in regulatory agreements with FWS and DFG. This is in spite of an approach that is accurately described as "horticultural", i.e., dedicated and experienced contractors have fertilized, re-seeded, planted nursery-grown stock, maintained an extensive problem-prone irrigation system and repaired areas of slope failure with hand tools.

The Conservancy believes it will likely take 5 years for those revegetation efforts to succeed; the Conservancy notes:

Issues affecting the progress of the project involve the difficulty of establishing a suitable micro-environment for seed germination on steep slopes, generally poor moisture retention there, and infertility of the imported disturbed soils. This is compounded by poor germination rates for some recommended native species and continuing long-term drought in the area. The work can be achieved but only at a high cost, both in dollars and commitment of those involved.

More importantly, the CBP's assertion that the massive Smuggler's Gulch fill will improve rather than hinder sedimentation concerns is based on questionable assumptions, as described in the September 16, 2003, memo from Phil Williams and Associates (PWA) to the California Department of Parks and Recreation (Exhibit 22), which states:

4. Sediment yield from the project footprint

[INS[CBP] FEIS] Report findings

The report used the MUSLE to account for sediment yield from the project footprint (presumed to be the earthen embankment) under the 100-yr event. This led to an estimate of 3391 tons for existing conditions and 2424 tons for the proposed project conditions. The decrease was due to the assumption that erosion control measures on the embankment would be more effective under the project conditions, compared with current (bare ground) conditions (i.e. lower C factor and higher P factor in the MUSLE model).

Comments

It is very hard to understand exactly how the analysis was carried out from the results presented in Appendix I; a schematic map of the selected areas would clarify matters considerably. It appears as though the pre-project conditions assessment was based on the existing topography while the post-project condition is based only on the embankment. It appears as though the postproject assessment did not look at cut slopes above the embankment, which could be a significant source of erosion. There was also no assessment of dirt roads associated with the project, which could be a significant source of erosion and sediment. In selecting C values (crop factors) the analysis made the assumption that existing vegetation cover was 25%, and that future cover would be 0% but with the addition of erosion control measures that cover the ground surface with geotextile. The analysis is very sensitive to these assumptions. Based on photos in the EIS it appears that 25% cover is an underestimate of current conditions. There is thus the potential that the existing conditions assessment is overestimating sediment yield, making the post-project conditions look relatively more advantageous. Using the assumptions as they stand produces an estimated reduction in sediment yield of 40% under the project. Assuming the current vegetation has a 50% canopy cover results in almost no change under pre and post project conditions (1% reduction in erosion). Using a canopy cover of 75% for current conditions results in a 34% increase in sediment yield under the project (from 1,599 tons to 2,424). This would suggest an increase in sediment yield of 825 tons under the 100-year event. Assuming the same percentage change for average conditions (a valid assumption since the C factor is a straightforward multiplier in the MUSLE equation) the current average annual sediment yield would be 1,094 under the 25% cover assumed by the Baker report, 790 tons assuming 50% vegetation cover, and 516 tons with 75% cover. Post project yield would be 796 tons using the Baker report assumptions. Thus the project could potentially yield an additional 280 tons of sediment per year, ignoring the cut slope sediment yield and the potential for gully erosion (see below).

An additional concern is that the MUSLE only considers rill and inter-rill erosion; it ignores gully erosion. If gullies were to develop on either the embankment or the cut slope above it this could lead to a significant increase in sediment yield beyond that calculated by this analysis. Changing the assumption of greater erosion control due to slope terracing (the P factor) does not significantly affect the resulting estimate; the predicted sediment yield rises to from 2,424 to 2,694 tons under the 100-yr event if we assume the slope terracing is not effective.

...

In summary it seems possible that the current conditions estimate of sediment yield is an overestimation, while the post project conditions assessment may be an underestimation.

This memo further states:

...[T]he amount of sediment generated by the project, and its proximity to the estuary is a potential cause for concern. There is also a cumulative effects issue; work by PWA and others has shown that the Tijuana Estuary is currently suffering from excessive sediment deliver rates from Smuggler's Gulch and Goat Canyon. If this project generates additional sediment loading, as seems possible, the cumulative impact will be made worse.

Regarding proposed erosion controls, the memo states:

EROSION CONTROL PROVISION

The Baker report contains provision for erosion control in two areas; source control on the earthen embankment and protection from accelerated channel flow from the 650 ft culvert. Permanent erosion control on the project will include a biodegradable geotextile, application of native vegetation seeds, terraces or benches on long slopes and sedimentation basins. Without more detailed plans and specifications, and information on monitoring and maintenance, it is difficult to comment on the effectiveness of these measures for sediment control. We anticipate that there may be problems achieving vegetation establishment on the embankments due to the relatively harsh growing environment and soils, and that rill and gully development may be a problem. A particular problem is that if the geotextile biodegrades before vegetation becomes established, erosion potential on the embankment will almost double. Using the Baker report MUSLE model and a modified C value of 0.45 (no canopy cover, no geotextile) causes the average annual project sediment yield to rise from 796 tons per year to 1,493 tons. With regards to the energy dissipator at the downstream end of the culvert, there is a discrepancy between the velocity figure stated in the report (23 fps)

and that used in the calculations for rip rap to protect the outfall (11.7 fps). Using the HEC-11 rip rap sizing equation the figure of 11.7 fps does give a mean diameter value of 0.88 ft, rounded up to 1 ft for safety. However, if the value used in the report is taken as correct, the required rock diameter rises to almost 7 ft. Likewise the length of channel armoring required is adequate assuming the appendix figures are used, but too small if the report figures are correct.

One potential area of concern is that the cut slope areas above the embankment may increase runoff source areas and create the potential for gully development.

The memo concludes:

It is hard to assess the MUSLE soil erosion modeling based on the data presented. The predicted sediment yield from the embankment appears to be reasonable assuming that the erosion control measures are successful. The effect of erosion on the cut slopes appears not to have been modeled; if this is so it is a serious omission that needs to be rectified. The choice of canopy cover values under existing conditions seems low, and may have led to an overestimation of sediment yield under current conditions, and a corresponding underestimation of project impacts. The analysis shows that if erosion control measures on the embankment are not successful sediment yield from the project could almost double, generating an additional 700 tons of sediment per year. Combining these issues it seems quite possible that the project will increase sediment yield by several hundred tons per year.

The general conclusion of the report is that the project will have a small but positive effect on sediment yield to the Tijuana Estuary. This is questionable given the discussion above. The impact of the project on sediment yield in percentage terms is likely to be low given the magnitude of sediment yields from the rest of the watershed, but the absolute amounts of sediment could potentially be quite high, and would be located close to the estuary with a high chance of delivery. Sediment delivery to the estuary is presently well above natural levels, and is adversely affecting estuary wetlands. Hence, it is recommended that increased sediment yield should be avoided.

In addition, the Department of Parks and Recreation points out (email communication, Sept. 11, 2003):

... the assertion that INS[CBP] makes in the EIS that there will be a positive difference (i.e. a net decrease in sediment produced after as compared to before the project) is based on an assumption that currently the undisturbed slopes in this area have cover values of about 25%. In comparison the slopes disturbed by the project will have an initial cover value of 0%. Accordingly, the soil erosion control techniques employed need only to account for about 26% of the gross sediment produced in order

to produce a net benefit. However, the assumption of 25% cover value is apparently based on dry season estimates. Because we have a Mediterranean climate (little or no rain in the summer) many of the native plants of this region are either wet season annuals or drought deciduous. This means that during the summer canopy cover values are very low. During the winter, when most rains fall and most erosion occurs, annuals grow and drought deciduous plants add canopy. Cover values during a normal to wet winter can approach 100% Thus the EIS over-estimates the amount of sediment produced by undisturbed slopes in the project area and so creates the appearance that the project will reduce the amount of sediment produced.

Another factor not considered in the analysis (or by PWA) is that undisturbed slopes in the project area are typically deflation surfaces. Deflation surfaces are soil surfaces that have been exposed to the erosive forces of wind and rain for long periods of time. During that time the smaller more easily transported soil particles have been removed by the forces of wind and water, leaving the larger less mobile rocks and cobbles armouring the soil surface against future erosion. When these deflation surfaces are disturbed the unarmoured soil beneath is exposed. Erosion and sedimentation rates increase until a new deflation surface is formed.

The hydro analysis in the EIS ignores both of these factors and thus falsely creates the impression that the project will actually decrease sedimentation in the Tijuana River Estuary.

The CBP responds:

The Commission Staff's conclusion regarding the potential for erosion from the project footprint resulting in significant adverse downstream water quality effects (sedimentation) seems to be primarily based on input from the Department of Parks and Recreation and their consultant, PWA, in the memo dated September 2, 2003. PWA comments regarding section 4, Sediment yield from the project footprint, and the erosion control provisions appear to be of particular relevance.

PWA expressed concern that the parameters used in applying the soil loss equation may have overestimated the sediment yield for existing conditions and underestimated the yield for the proposed condition. Incorporating PWA's recommended values for existing and proposed conditions still results in a decrease in sediment yield in the project area for the 100-year storm.

PWA points out that cut slopes above the embankment were not considered in the proposed conditions assessment for sediment yield. The cut area was not included in the equation because sedimentation ponds will intercept any sediment suspended in the drainage from cut slopes before the drainage reaches the stream flow.

PWA and DPR commented on the soil erodibility of the existing condition versus the proposed condition, and expressed concern regarding the effectiveness of the proposed erosion control provisions. We remain certain that the combined effect of all the proposed erosion control measures (sedimentation ponds, soil compaction, terracing, use of geotextiles, establishment of vegetative ground cover, irrigation, sedimentation ponds and other surface drainage control features), coupled with comprehensive monitoring and aggressive maintenance programs, will result in reliably stabilized slopes and no net increase in project-related sedimentation in the Tijuana Estuary.

The CBP also states that a sediment basin in the bottom of the canyon at Smuggler's Gulch is not a necessary component of the proposed project for the following reasons:

- 1. The project design will include expertly designed erosion and sediment control (ESC) features, including sedimentation ponds, to protect the Tijuana Estuary from construction and ongoing project-induced erosion from cut and fills slopes.*
- 2. These ESC features will be installed in accordance with all applicable industry standards under the supervision of a qualified water quality expert.*
- 3. A water quality expert will monitor all ESC features on a regular basis during and after construction.*
- 4. Any ESC feature found to not be performing as expected, or in need of maintenance or repair, will immediately be redesigned and/or maintained as necessary to ensure the effectiveness of the overall ESC system.*

Furthermore, the environmental impacts that would result from the incorporation of a sediment basin across the bottom of the canyon into the project (reference Alternative 3 in Appendix A to these comments) preclude this alternative from further consideration as a practicable alternative.

Finally, the CBP has agreed to provide the Commission staff with all SWPPP, WQCP, and water quality monitoring plans and reports, and has left open at least the theoretical possibility that if the monitoring shows increased sedimentation, and other remediation efforts are not successful in eliminating this increase, CBP would "consider" constructing a downstream sediment basin to protect the estuary.

[Staff Note: The Commission staff is still reviewing the revised sedimentation analysis (Exhibit 36) and will prepare an addendum prior to the hearing.]

The Commission agrees with these concerns raised by the Department of Parks and Recreation and its consultant's report, and finds that the CBP has not established that the project would reduce rather than increase sedimentation. Neither the revegetation plans nor the water quality

measures have been finalized, and the Commission lack sufficient information to determine whether the project would contribute significantly to erosion and adverse water quality effects, particularly downstream of the proposed fills in the Tijuana River Estuary.

Based on the information it does have, given the national (and international) importance of this estuary, and the serious threats from sedimentation, and the consequences should CBP's assumptions turn out to be overly optimistic as discussed in the Department of Parks and Recreation's communications and its consultant's report, the Commission finds the project would likely significantly adversely affect downstream water quality, would not control runoff, would interfere with surface water flow, would not maintain natural vegetation buffer areas that protect riparian habitats, and would not minimize alteration of natural streams. The Commission therefore finds the project inconsistent with most of the provisions of Section 30231 of the Coastal Act, and that the lack of final water quality/SWPPP plans means the Commission lacks sufficient information to determine the project's consistency with this section.

Moreover, feasible and practicable less environmentally damaging alternatives are available which would avoid or reduce water quality effects, including, as discussed on pages 29-37 and 46-47, removal of the large fill in Smuggler's Gulch and implementing either of the two switchback road alignments considered but eliminated by CBP from consideration, and incorporating a sediment basin into the deterrence features (such as additional fences, cameras, and lights) at the bottom of Smuggler's Gulch. Concerning the CBP's assertion that these alternatives would be more problematic for the estuary due to their closer proximity to the estuary, and the steepness of the canyon walls, the Commission believes that it is disingenuous to argue that the CBP could contain all potential increases in sedimentation from the proposed project, but not from Commission-preferred alternatives, through the use of Best Management Practices.

D. Stream Alteration. Section 30236 of the Coastal Act provides:

Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.

Smuggler's Gulch is the largest stream channel within the project corridor, with a width varying from 65 ft. to over 131 ft. It contains a number of sensitive wildlife habitats, including wetlands and riparian habitat. Like all of the watercourses along the project corridor (in Areas

V and VI), Smuggler's Gulch is ephemeral, although it conveys wastewater flows from Mexico, which during low flow periods are captured and collected for treatment at the nearby International Wastewater Treatment Plant (IWTP) located east of Smuggler's Gulch.

The CBP proposes to fill the canyon at Smuggler's Gulch across its entire width, with a box culvert structure conveying stream flows underneath the fill and road structure. This fill and culvert would result in the channelization and substantial alteration of approximately 900 linear feet of the stream that flows north from Mexico through the canyon and ultimately into the Tijuana Estuary. Section 30236 only allows stream channelization for water supply, flood control, or where habitat improvement is the primary purpose. The project does not qualify as any of these limited uses, and the Commission finds the project is inherently inconsistent with Section 30236.

The Commission further finds that the project has not incorporated best mitigation measures feasible, such that even if it were an allowable use it would not meet the requirements of Section 30236. As discussed in the wetlands, environmentally sensitive habitat and water quality sections (Sections III. A-C) of this report, at a bare minimum best mitigation measures feasible would need to include a sediment basin to capture sediment running off the steep slopes of the proposed fills. The CBP states that alterations of streams (and other coastal waters) have been minimized to the maximum extent practicable, while satisfying the stated purpose and need and complying with IIRIRA, and that, as discussed in the water quality section above, the potential effects to surface water and water quality associated with erosion and sedimentation during construction activities and/or accidental spills would be addressed through the Best Management Practices (BMP) required for compliance with the Stormwater Pollution Prevention Plan (SWPPP). For the reasons discussed on pages 50-60, the Commission both disagrees and finds these measures incomplete.

More importantly, as discussed on pages 29-37 and 46-47 the Commission believes implementation of alternatives consisting of patrol roads down the slopes of Smuggler's Gulch and the reduction of fill across the canyon are feasible, implementable, and practicable, and would meet the border patrol and deterrence needs as outlined in IIRIRA.

The Commission concludes that the project: (1) is not an allowable use for stream alteration; (2) does not incorporate best mitigation measures feasible; and (3) that feasible and practicable alternative project designs are available that would minimize alterations of streams (and other coastal waters). Thus the proposed project is not consistent to the maximum extent practicable with Section 30236 of the Coastal Act. Further, based on the lack of erosion control plans, that the Commission has insufficient information to determine whether the project is consistent with Section 30236.

E. Public Access and Recreation. Sections 30210-30212 of the Coastal Act provide for the maximization of public access and recreation opportunities, taking into account public safety, military security, and fragile coastal resource protection needs. Section 30240(b) of the Coastal Act provides that development:

... in areas adjacent to and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those ... recreation areas.

Most of the lands along the U.S. side of the border in Areas V and VI are in public ownership, either as public parks or habitat reserves. In Area VI, the 418 acre Border Field State Park, which includes Monument Mesa, the site of the Mexican American Friendship Park and the Border Monument (now embedded in the existing primary Border Fence), surrounds private inholdings at Lichty Mesa and constitutes the majority of Area VI. The western half of Area V is within the County-owned Tijuana River Valley Regional Park, planned and managed for park uses (e.g., open space, recreation, and habitat preservation). To the north of these lands is the TNERR, a 2,531 acre wildlife reserve co-managed by the California Department of Parks and Recreation (DPR) and the U.S. Fish and Wildlife Service, and which provides valuable nature study and educational recreation opportunities. Collectively, these lands represent regionally important recreational opportunities with great potential for increased value and use to the region. The Department of Parks and Recreation notes that public park acquisitions in this area have totaled \$25 million, with another \$20 million spent for habitat restoration on these lands.

The FEIS characterizes recreation in the project area as including:

... horseback riding, hiking, biking, bird watching, picnicking, motorcycle riding, and sightseeing. Recreational use of the project area occurs in park/recreation areas as well as undeveloped areas. There are two recreational areas in the project area, Border Field State Park and Tijuana Valley Regional Park. The latter is managed by the County of San Diego.

Border Field State Park is operated by the state of California and stretches from the Pacific Ocean east to the eastern side of Goat Canyon. The park contains a limited amount of developed park facilities and is primarily used for day activities such as picnicking, fishing, hiking, sightseeing, horseback riding, bird watching and educational opportunities. Friendship Circle and the 1852 International Border Monument mark where Mexico and the United States meet. This monument was the first international monument constructed and commemorated at the end of the American-Mexican War. The park, which was dedicated in 1974 by former First Lady Patricia Nixon, was intended to improve relations and social contacts between the United States and Mexico. As a result, the park is often used by people on both sides of the border to

pass messages back and forth between the two countries through the existing fence. The majority of the parkland is undeveloped and is characterized by coastal sage scrub and lowland coastal marsh.

The FEIS provides additional details as follows:

The Tijuana River Valley Regional Park is a 2,300-acre park owned and operated by the County of San Diego, Department of Parks and Recreation. The park consists of developed sports facilities as well as an extensive system of trails. The park contains a diversity of habitats ranging from dense riparian forest to maritime scrub on the slopes of Spooner's Mesa. These habitats can be accessed through the extensive system of trails throughout this fertile river valley.

Approximately 372 acres of the park are also located within the TRNERR. Portions of Border Field State Park are located within Area V (Smuggler's Gulch) and additional acres are planned for acquisition by the park.

In addition, the Tijuana River Valley Equestrian Association (TRVEA) maintains a network of horse trails through the TRNERR and Border Field State Park. These trails have been approved by both entities. Roads are primarily used in the Smuggler's Gulch, while horseback trails have been established in the coastal areas.

In its consistency determination the CBP maintains that the project would not cause a significant adverse impact to public access to the local beaches or associated recreational facilities because "Under the preferred alignment described in the FEIS, public access to the BFSP would be unrestricted during normal park hours." The consistency determination also states concerning public access:

INS[CBP] has committed to designing and constructing an aesthetically pleasing gate and fence within the BFSP area that can serve both as an inviting entrance to the BFSP and also as the required enforcement zone. The gate would be locked except during normal park hours. Copies of some of the designs that have been presented to the California State Parks are included in Appendix J of the 2003 FEIS.

Access to the Bunker Hill would be improved by paving the primary road to the top. Currently, access to the top of Bunker Hill is limited to 4-wheel drive vehicles due to the steepness and poor conditions of the extant road.

The area between the primary fence and the secondary fence would be restricted to public access, except at the BFSP, as described above. However, the public seldom uses this corridor. In addition, this use is similar to the secondary bollard fence system

in Area IV, for which the California Coastal Commission has already granted Negative Determinations (ND-188-96 and ND-9-97).

Concerning recreation, the consistency determination states:

The BFSP's major recreational uses are as a picnic area and for sightseeing mainly to view San Diego Bay, the Tijuana River Estuary, and portions of Mexico along the coast. The area immediately north of the park is used for horseback riding and bird watching. The picnic area will be encompassed by the proposed action, but there will be unrestricted access to this area during normal park areas. Some extant roads that are used as horseback trails (0.6 miles in Smuggler's Gulch and 0.4 miles west of Bunker Hill) will be closed during the construction of the Border Infrastructure System. The USBP will work closely the BFSP and Tijuana Valley Equestrian Association to allow the use of the access road on the northern slope of the embankment at Smuggler's Gulch to access the mesas on either side of the gulch. The proposed action will indirectly benefit the unique and sensitive areas north of the proposed Border Infrastructure System by reducing or eliminating illegal traffic, brush clearing, fires, and by a reduction in the enforcement footprint of USBP.

Concerning mitigation measures, the FEIS states that construction activities in Border Field State Park would be restricted to non-holiday weekdays only to reduce/eliminate adverse noise effects on visitors, and that different designs of the fences and entrance to the Border Field State Park at Monument Mesa (FEIS Appendix J, Exhibit 27) are currently being coordinated with the California Department of Parks and Recreation and the California Resources Agency. The CBP believes this coordination "... could provide a more aesthetically pleasing design and/or enhance the functionality of the park. These measures also include planting native shrubs (e.g., chamise or mulefat) north of the tertiary fence to conceal the border infrastructure system." The CBP also states, in FEIS Volume II, Response to Comments, that "visitation rates are sparse..." at Border Field State Park, that the Department of Parks and Recreation has not responded to its concept design plan alternatives, and therefore that "... the CBP cannot commit to any mitigation at this time." [Comment CCon-12 Response] The Department of Parks and Recreation states that it has not responded because it does not believe any fencing surrounding the park is appropriate (pers.communication, DPR).

The Commission finds that the project would adversely affect recreational resources in the coastal zone in a number of ways: (1) direct loss of lands currently available and used for a variety of recreational purposes (at least 150 ft. wide at Spooner's Mesa and from the west side of Goat Canyon to Monument Mesa); (2) introduction of imposing, psychologically intimidating and unaesthetic landforms, roads, and fences at and adjacent to Border Field State Park; (3) loss of wetlands and environmentally sensitive habitat; (4) adverse effects on scenic coastal views; and (5) downstream adverse effects on the estuarine habitat from sedimentation from the massive fills on steep slopes and in highly erodible soils.

Of particular concern is the fence proposed around the northern boundary of the day use area at Monument Mesa. Admittedly underutilized, in part due to the sediment-clogged access road to the park, this park nevertheless contains enormous potential for expanded recreational opportunities. The Commission appreciates that the CBP has abandoned its initial proposal to run the fence and road through the middle of Monument Mesa, and across the beach to and into the surf zone. However, the Commission believes the fence with which the CBP proposes to surround much of the base of the mesa (with an entrance at the access road to be open during daylight hours) would reduce the public's willingness to visit this facility. The CBP maintains that this opinion is speculative, stating:

There is no data that suggests that fencing would reduce the public's willingness to visit Monument Mesa. It is just as likely that fencing would result in a more secure, inviting environment that would increase the public's willingness to visit, particularly in light of the County of San Diego's proposed plans to add miles of new handicap accessible pedestrian and equestrian trails. These proposed trails, even with buried sensors, will potentially attract illegal aliens and drug smugglers.

This disagreement is difficult to resolve without agreed upon designs for the proposed fence. The Commission believes the proposed "aesthetic" treatment sketched out in the FEIS (Appendix J (Exhibit 27)) would do little to ameliorate this adverse effect. The proposed fences, landform alteration and roads to the east of Monument Mesa would only compound this diminution of on the quality of the recreational experience at the park. The CBP's goal of establishing barriers sufficiently intimidating to deter illegal border crossings may simply be mutually inconsistent with the recreation goals of expanding visitation at Border Field State Park. At the same time the Commission notes that the CPB is working with Dept. of Parks and Recreation on aesthetic designs at Border Field State Park; to date conceptual agreements include relocating the fence from the south to the north side of the parking lot along the northern boundary of Monument Mesa, and stopping the fence about 1/3 of the way down the western boundary of Monument Mesa (leaving the southern 2/3 of the western side of the mesa unfenced). The CBP now states:

Upon further analysis, the USBP San Diego Sector has determined that eliminating the fence on the west end of Monument Mesa along the beach, such that the mesa would not be surrounded by fencing, could potentially be accomplished without creating an unacceptable tactical disadvantage and while maintaining compliance with IIRIRA.

However, until a reasonably well-developed design can be provided, the Commission does not have sufficient information to enable it to assure that the project will avoid detrimental effect on recreational use of this park. Based on the various designs provided to date, the Commission finds that the project would adversely affect the park.

The CBP maintains it cannot adequately protect the border with a single fence in this area, stating:

This alignment [i.e., a primary fence only] would require the fortification of the existing primary fence, including replacement of the chain link fence at Friendship Circle on Monument Mesa with a solid steel fence. Fewer direct impacts (approximately 11 total acres) would be incurred if this alignment were chosen, but the USBP would have to continue its enforcement actions within the estuary, Monument Mesa, and the coastal sage scrub communities on the surrounding hills. As indicated above, the USBP could not protect the south side of the fence from destructive forces and thus could not assure the overall integrity of the infrastructure system.

Based on review of aerial photography and ground reconnaissance, there are literally hundreds of trails that have been established by illegal aliens through the marshes within the Tijuana River estuary.... Assuming each of these trails are two ft wide (many are up to four ft wide) and transect the entire estuary (approximately 2.25 miles), 50 such trails would impact about 27 acres. In addition, according to Navarro (2001), Mr. Brian Collins of the Tijuana National Estuary reported that "... illegal crossers trampled rare plants and nests of endangered birds on their furtive way north, sometimes even eating the birds' eggs for breakfast." Absent the Border Infrastructure System, this impact would continue. Additionally, as illegal aliens and smugglers begin to breach the fortified primary fence, more traffic through these sensitive areas would occur, causing additional impacts to the coastal marshes. This alternative, therefore, would ultimately result in more indirect impacts to the Tijuana Estuary than the proposed action.

This alternative was eliminated from further consideration because of the increased impacts to the coastal marsh, the potential effects to the effectiveness of the overall Border Infrastructure System, and the fact that this alternative alignment would not satisfy the spirit and intent of IIRIRA.

Commission Conclusion – Recreation. The CBP's rationale for its current proposal is far from compelling, and regardless of its aesthetic treatment, a fence around the mesa will be likely to adversely affect the quality of the recreational experience at this park (although the extent of this effect is difficult to determine absent plans for the fence). The CBP's goal of establishing barriers sufficiently intimidating to deter illegal border crossings is incompatible with recreation goals of expanding visitor use at Border Field State Park. Moreover, given the topography, Monument Mesa is a relatively easy area to patrol and protect, because both the beach area and Yogurt Canyon are easily viewed and accessed by border agents. Effective border deterrence in these areas would also eliminate the adverse effects on recreation and habitat the CBP attributes to past environmental damage from illegal border crossings (and Border Patrol deterrence efforts). The fact remains that the CBP's proposal is incomplete at

best, and the Commission is unable to determine that the project would not result in unmitigable adverse impacts to public use and enjoyment of Border Field State Park. The CBP has not adequately explained why, if the Operation Gatekeeper fortifications in the mid 1990s were added to the already built secondary and tertiary fencing in Areas II-IV, and the improvements in the current proposal for the remaining segments are implemented, it could not adequately protect the border without the proposed new road on Lichty Mesa and the fence surrounding much of Monument Mesa. If the beach and the southwest 2/3 of the west side of Monument Mesa can be effectively patrolled without new roads and fencing, as the CBP has agreed to, and given that agents viewing the beach will need to be continuously patrolling Border Field State Park (because people can pass the fence in the ocean), it is unclear why the CBP could not, with the same personnel, adequately deter and enforce the rest of Monument Mesa and Lichty Mesa with only a single (possibly fortified) fence in place. In addition, as noted above, the CBP's proposal is incomplete (only preliminary sketch plans are provided), and the Commission thus does not have sufficient information to fully determine the full impact of the project on these recreational resources. The Commission does, however, have sufficient information to understand that the CBP's intent to surround Monument Mesa with fencing, regardless of its aesthetic treatment, cannot be found consistent to the maximum extent practicable with the public access and recreational policies (Sections 30210-30212 and 30240(b)) of the Coastal Act.

One of the more succinct and prophetic comments made to the CBP concerning its lack of vision and unwillingness to seriously consider the recreational values in the region has been the Coastal Conservancy staff's observation (Exhibit 29) that:

Strikingly absent from the assessment of environmental impact is a comprehensive assessment of the values that, in combination, make the international border at the Pacific Ocean a critical heritage site for the two nations, an area referred to by both Mexican and American border communities as "Friendship Park". ...

Border Field State Park's two oceanfront mesas, Lichty Mesa and Monument Mesa, constitute a heritage and ecological site consisting of several interrelated parts, having historic, cultural ecological, geographical and scenic significance unparalleled on the U.S./Mexican border or the California Coast. An extensive array of public assets exist there including a 4000 year-old Kummehay cultural area, an extremely rare assemblage of coastal scrub plants, and the 150-year old international monument to the treaty commemorating an end of Mexican-American enmity. While ... [the proposed alignment] is laudable for maintaining American access to Friendship Circle and the American side of the ...monument ... the actual project impact to ... this critically important coastal site ... cannot be evaluated.

Current trends indicate that San Diego/Tijuana will become one of the great North American centers of the 21st century, unique in its international geography and character and in its social and economic integration. The U.S. Border Infrastructure System is a highly visible and symbolic part of the fabric of the bi-national community. Where an act of the United States Congress established the necessity for the Border Infrastructure System, it is incumbent upon the agencies of the United States government to use measure and ingenuity to carry out the mandate in accord with all the laws of the United States and the State of California. Based on our review of the FEIS and its preferred project proposal, this challenging initiative has not been successfully met.

The Commission agrees with these comments and concludes that the proposed project: (1) is inconsistent with the requirement of Section 30240 of the Coastal Act that new development be sited and designed to prevent impacts which would significantly degrade the park and recreation areas within and adjacent to it; (2) is inconsistent with the requirement of Section 30240 that new development be compatible with the continuance of existing recreation areas; (3) is inconsistent with the requirements of Sections 30210-30212 to maximize public access and recreation opportunities (even when taking into account public safety, military security, and fragile resource protection needs); and (4) lacks sufficient information to enable the Commission determine the project's effect on public access and recreation. The Commission further finds that feasible and practicable alternatives are available, including fortification of primary fencing at Border Field State Park (and adding deterrence infrastructure such as sensors, cameras, and lights), and replacing the capping of Lichty Mesa with a less habitat-altering design (and which could include secondary fencing). These alternatives would enable the CBP to both comply with IIRIRA and reduce significant adverse effects on these important public access and recreation opportunities. Therefore, the Commission concludes that the proposed project is not consistent to the maximum extent practicable with the access and recreation policies of the CCMP.

F. Public Views. Section 30251 of the Coastal Act provides:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

The FEIS notes that states most aesthetic resources within the project area are directly related to the natural communities of the area (including vegetation communities consisting of grasslands, chaparral, mulefat scrub, coastal sage scrub, salt marsh, maritime succulent scrub, and southern willow scrub), and that the important public view are those of the Tijuana River, Tijuana estuary, coastal dunes and beaches. The FEIS maintains that where disturbed and/or ruderal lands predominate, these "...would be considered to have low aesthetic value."

Describing project impacts, the FEIS states the acreage affected would be 95 in Area V and 32 in Area VI. Of this, the FEIS considers 45% of the Area V acreage to be "disturbed and is considered to be of low aesthetic value." In Area VI, the FEIS states:

Access would be allowed to Friendship Circle under the proposed alternative...), though impacts to the viewshed from the fence structure would still occur. Under all alignments of this alternative, there would be some indirect benefits to aesthetics in communities north of the project area resulting from the reduction of illegal traffic, brush clearing, fires, and littering caused by illegal aliens.

The CBP's consistency determination states:

The proposed project activities will be visually compatible with the character of the surrounding areas to the south, and, where feasible, will restore and enhance visual quality in visually degraded areas. Within the Tijuana estuary and especially near the BFSP, INS[CBP] has proposed that native shrubs be planted along the northern boundary of the Border Infrastructure System to enhance the aesthetics of the system. Numerous conceptual designs for the Border Infrastructure System have been submitted to the California Resource Agency and California Department of Parks and Recreation for review. Copies of some of these plans are contained in Appendix J of the FEIS.

The Commission believes that the area's scenic values are closely linked to the recreational values as discussed on Section E above of this report. The project is located in a highly scenic area and forms the southern backdrop for the scenic Tijuana River Valley, and its recreational opportunities all integrally involve scenic considerations.

The Commission finds that the proposed vast landform alteration and introduction of unnatural fills, roads, fences, lights, and other infrastructure, especially the 4.3 million cu. yd. cut and fill in Smuggler's Gulch, the fill atop Lichty Mesa, and the fence surrounding much of Monument Mesa, could not be construed as minimizing the alteration of natural land forms and would be visually incompatible with the character of surrounding areas.

In addition, the project is located within a scenic area designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation, and thus called out for special protection under Section 30251 of the Coastal Act. That plan, published in August 1971, depicts the (at that time) “Proposed Tijuana River State Park” as one of the “California Coastline Landscape Preservation Projects” and deserving special protection as a highly scenic area. A subsequent City of San Diego Tia Juana River Valley Plan (dated March 1977) depicts that proposed park as extending at least to the lower reaches of Smuggler’s Gulch. As discussed on pages 62-68, the proposed Border “improvements” would adversely affect the quality of the recreational experience, due to the massive landform alteration in Smuggler’s Gulch and between Bunker Hill and Monument Mesa, combined with the walling off of much of the day use area at Monument Mesa and the capping at Lichty Mesa. The Commission finds that the project would result in significant adverse effects on public views in this scenic coastal area, would not minimize the alteration of natural landforms, would not be visually compatible with the scenic and recreationally important (for recreation that is dependent on visual quality) surrounding area, and is within a highly scenic area but is not subordinate to the character of its setting. The Commission further finds, similarly to its public access and recreation finding, that because only preliminary sketch plans are provided for Border Field State Park fencing, it has insufficient information to fully determine the project’s impact on public views.¹⁰ The Commission therefore concludes that: (1) the project is inconsistent with Section 30251 of the Coastal Act; and (2) because (as previously discussed) feasible and practicable less damaging alternative designs are available that would allow the project to be undertaken in a manner more fully consistent with Section 30251, the project is not consistent to the maximum extent practicable with this enforceable policy of the CCMP.

G. Geologic Hazards. Section 30253 of the Coastal Act provides that new development shall:

(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.

(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

Geologic hazard issues raised by the project in Areas V and VI include increasing flooding risks through the box/culvert/channelization of the creek through Smuggler’s Gulch, major landform alteration in Smuggler’s Gulch and at Lichty Mesa, placement of steep fills in areas

¹⁰ The CBP maintains: “These plans are only preliminary because CDPR has thus far refused to provide comments on design concepts that their staff helped to develop.”

of known landslides in Smuggler's Gulch, placement of steep slopes in Smuggler's Gulch which could fail and require the need for further protective devices, and the potential for erosion from large cuts and fills in areas with steep slopes and highly erosive soils.

The CBP prepared several geotechnical reports addressing geologic hazards as part of the FEIS (Appendix G). Addressing the potential for flooding, the CBP initially proposed two 8 ft. by 8 ft. box culverts to accommodate flood flows through the 2,460-ft-wide by 310-ft-deep, steep walled canyon (Smuggler's Gulch). The CBP estimates maximum flood flows to be up to approximately 1,450 cubic ft per second [cfs]), with the potential for large debris to present further concerns when designing a culvert that prevents human passage. Based on its most recent hydrological study (Baker 2003; FEIS App. G), the CBP revised the proposal. To ensure flood conveyance with heavy debris loads, two 10-ft x 10-ft culverts are now proposed for this drainage structure (Baker 2003). The FEIS also states "A stilling basin and other energy dissipation measures will be included in the final design for the outfall of the culverts to ensure that downstream water quality and velocity are not changed." Designs for these features have not yet been provided.

Concerning landslide potential, the FEIS notes that a large ancient landslide complex exists on the east side of Smuggler's Gulch that will need to be taken into consideration during the preparation of the final engineering plans. However, the FEIS states that the proposed fill in Smuggler's Gulch "... should increase the stability of this landslide. ..." (citing Appendix G, Kleinfelder (1999b)). The report geotechnical report further states "... that the risk of slope failure as a result of the presence of the slip surface is low." However, quantitative slope stability analyses in support of this assessment were not included in the FEIS or its appendices. The stability of the fill slopes themselves was evaluated in the 1999 Kleinfelder report. The slope in Smugglers Gulch is planned to be at a slope of 1.5H:1V, much steeper than the generally accepted maximum slope of 2H:1V for unreinforced fill slopes as described in the Uniform Building Code. The 1999 Kleinfelder report indicated, however, that this slope had a static factor of safety of 1.7 and a pseudostatic factor of safety of 1.4, in excess of the industry-standards of 1.5 and 1.1, respectively. However, as pointed out in a third-party review by Christian Wheeler (3 October 2003), this analysis made use of incorrect soil strength parameters. The analysis was based on the strength of in-place native soils rather than on compacted fill. When the values for compacted fill were used, the factor of safety was reduced to 1.05 and 0.78 for static and pseudostatic conditions, respectively, indicating that the proposed slope would not meet the industry standard levels of safety. The Christian Wheeler report went on to say, however, that they felt that the soil strength values adopted for compacted fill in the 1999 Kleinfelder report were too conservative. Substituting values that they felt were more appropriate, Christian Wheeler arrived at factors of safety of 1.40 and 1.04, for static and pseudostatic conditions. Only by decreasing the slope to 1.63H:1V, or by the use of reinforcing materials or chemical soil treatments, could the needed factor of safety be obtained. Both Christian Wheeler and the Commission staff feel that the assumed strength values used in the Christian Wheeler analyses should be confirmed before the design of the

final slope. The Commission notes that the Army Corps of Engineers apparently is prepared to accept lower standards for slope stability: factors of safety of 1.3 and 1.0 for static and pseudostatic conditions, respectively. This is neither standard of practice in the industry nor is consistent with past Commission action, and the Commission cannot find that the proposed fill slope in Smugglers Gulch assures geologic stability as is required by Section 30253 of the Coastal Act.

Further, the analysis of the fill slope does not address two other potential failure mechanisms. The first is reactivation of the ancient landslide complex on the east wall of the canyon. Although the Commission staff geologist agrees that the Smugglers Gulch fill would tend to increase the factor of safety against this type of failure, there are no analyses that show either the current stability of the landslide complex or the effect that the fill would have on the stability of this complex. Second, the slope stability analysis for the fill slope assumes that the fill would be adequately keyed into competent soils at its base. Because of the loose alluvium, undocumented artificial fill, and landslide debris that is present beneath the floor of Smugglers Gulch, such an adequate keyway may be difficult to establish. None of the reports reviewed demonstrate that suitable substrate for such a massive fill slope exists in Smuggler's Gulch.

The CBP states:

Results of the preliminary geotechnical investigations are being verified through more comprehensive sampling and analysis during the development of final designs. If necessary, the proposed fill slopes will be reinforced to ensure factors of safety are in compliance with industry standards.

The FEIS also relies on the implementation of revegetation and surface drainage systems to reduce geologic risks. At Lichty Mesa, where embankments are also proposed, the FEIS states: [The proposed] alignment "... would generally follow existing roads and natural contours and thus would have insignificant effects on the area's geologic features." The FEIS also states that "... all cut-and-fill actions would have to be designed and planned in consideration of the highly erodible soils and the high potential for landslides in Southern California." FEIS mitigation measures for geologic hazards consist of the erosion controls, water quality measures, and revegetation efforts discussed in the water quality section of this report. The FEIS states:

There is also a potential for increased soil erosion during construction due to an increase in surface runoff; however, runoff would be captured by storm drainage, thus minimizing the potential for soil erosion. In addition, compaction techniques and erosion control measures such as jute fiber, stilling basins, waterbars, gravel bags, gabions, straw bales, and re-seeding would be implemented to alleviate these situations, as described in Section 2. A SWPPP would be required since the area of impact would be greater than one acre.

As mentioned previously in Section 4.2.2, several soil associations are present that require special engineering designs and construction methods to allow the soils to be used for road material. Construction methods that would be implemented to ensure slope stability and erosion control would include, but are not limited to, over excavation and backfill, compaction using thinner layers (lifts), revetments, and terraces.

The geologic reports in the FEIS do not contain the attachments and other documentation relied on to yield the author's conclusions. This information is necessary to review or confirm the report's conclusions. Again, the Commission staff is still reviewing the additional geologic information submitted, as well as the sedimentation information (discussed in the following paragraph and in the water quality section of this report), and will prepare an addendum prior to the hearing. At this time, the Commission has inadequate information at this time to determine whether the project will affect landslide potential or geologic stability, and thus to make a determination as to the project's consistency with Section 30253.

With respect to increasing erosion, for the reasons discussed in the water quality section of this report, and noting the steep slopes (1.5:1) and extreme difficulty of revegetating the highly erosive soils in this area, for the reasons discussed on pages 55-60, the Commission finds that increased sedimentation and erosion are likely and that the project would be inconsistent with the requirement of Section 30253 that new development "neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area." To address this inconsistency the project needs to be modified to include removal of the large fill slope in Smuggler's Gulch, and, if it can be properly designed, to implement a sediment basin to protect the Tijuana Estuarine National Estuarine Research Reserve from threats of erosion and sedimentation from upstream areas (as noted on page 60, this could be combined with fences and other deterrent features). The Commission also needs to review final plans for the project features that will limit increases in flood flow rates and stream velocity in order to have sufficient information to determine the project's consistency with Section 30253; at this point the CBP has agreed to submit this information when it is available for Commission staff review and concurrence.

H. Archaeological Resources. Section 30244 of the Coastal Act provides that "Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required." The project area has a rich and archaeological history, noting evidence of hunting and gathering communities dating back at least 7,000 years. The CBP's FEIS reports in detail on a 1998 records search and field surveys. For Areas V and VI, the CBP's consistency determination summarizes the potential cultural values as follows:

Area V contains seven recorded cultural resource properties [FEIS Table 3-5, Exhibit 28], but three sites have disappeared and are thought to have been destroyed. The remaining four are ineligible for inclusion in the National Register of Historic Places (NRHP); therefore, no historic properties would be affected in Area V by project activities.

In Area VI, testing of the archaeological site CA-SDI-15,038 would be required to determine its NRHP eligibility status. Mitigation measures would be taken should the site prove to meet the eligibility criteria. Site CA-SDI-3627 is considered to be potentially eligible and site CA-SDI-4281 is considered eligible for the NRHP. These sites would require avoidance and/or other mitigation measures. Sites CA-SDI-222 would be avoided under the preferred alignment (BHPO-4).

The FEIS provides greater detail on these two sites (as well as the remaining sites). The FEIS notes that Site CA-SDI-3627 “consists of the remains of three World War II fire control stations and associated structures, as well as a prehistoric lithic scatter” and the FEIS suggests:

Due to the historical significance of the World War II base-end stations, and the fact that only two other base-end stations are known to exist in San Diego (on Point Loma), it is recommended that the historic component of site CA-SDI-3627 be considered eligible for inclusion in the NRHP and that all base-end stations at the site be avoided, consequently mitigating the potential impacts to the historic component of the site. At some point, a more comprehensive documentation of the historic component at site CA-SDI-3627 should be completed, including both field and archival research.

The FEIS describes Site CA-SDI-4281 as containing a “substantial” cultural deposit, with evidence of San Dieguito, La Jolla, and Late Prehistoric occupations, and eligible for inclusion in the NRHP. The FEIS notes:

Given the extent of the site and the depth of the deposit, it is likely that much of the site retains a considerable amount of integrity. In March of 2000, an on-site meeting was held with representatives from CDPR; California SHPO; USACE, Fort Worth District; Michael Baker Engineering; and an internationally noted site preservation specialist. The site was assessed as to the feasibility of capping the site to protect it from possible impacts from the proposed project (Thorne 2000).

Analyzing project impacts, the FEIS states that the project would not affect any Area V cultural resources, and that in Area VI :

Options for road improvements going to the top of the hill would require avoidance and archaeological monitoring during construction. This alternative would require mitigation measures be undertaken at eligible and listed sites CASDI- 4281 and CA-

SDI-222. Impacts to CA-SDI-222 under this alternative would be indirect. The capping-and-fill measures noted previously for Lichty Mesa (under BHPO-1) would be part of the mitigation of impacts to the site.

Mitigation measures proposed are as follows:

Potential adverse impacts to historic properties have been mitigated through a policy of site avoidance and/or testing. Further testing of cultural resources that are deemed to be potentially eligible for NRHP-listing would be required prior to construction, consequently, implementation of the Border Infrastructure System would have no effect on historic properties. Mitigation measures that could be used for any sites discovered during construction activities, when approved by SHPO, include, but are not limited to, data recovery, burial (capping) of the site with gravel or other aggregates, and use of professional archeologists as monitors during the maintenance operations.

All construction activities shall be at least two feet away from the international boundary to avoid impacts to historical boundary monuments and other demarcations. Near each permanent boundary monument, strict construction precautions would be implemented to avoid potential damage to these items.

The State Historic Preservation Officer (SHPO) confirms that the CBP is working cooperatively with it on an inter-agency Memorandum of Agreement (MOA) that will contain prescribed mitigation measures. However that agreement has not been completed or submitted as part of this consistency determination. Nevertheless, the CBP states: “The proposed action avoids impacts to cultural resources by capping Lichty Mesa, aligning the BIS around the base of Monument Mesa, and avoiding the top of Bunker Hill. All these measures have been approved by the SHPO.” In addition, the CBP has agreed to submit the SHPO-approved plans to the Commission staff for its review and concurrence. Although it has concerns over the proposed capping on Lichty Mesa from a habitat perspective (as discussed on page 47), with respect to archaeological resource protection, the Commission finds the project consistent with the requirement of Section 30244 that mitigation measures as identified by the State Historic Preservation Officer be included for development that would adversely impact archaeological or paleontological resources.

I. Related Commission Action. Past Commission reviews of border fence improvements are as follows:

Consistency Determinations

1. CD-81-92, Corps of Engineers, repairs and improvements to primary border fence, between Goat Canyon and just east of the picnic tables in Border Field State Park and a 250 foot length west of the picnic tables and east of the beach

2. CD-83-92, Corps of Engineers, construction of a lighting system along the border fence. The purpose of this project is to reduce foot traffic across the border
3. CD-90-92, INS, primary fence across the beach
4. CD-111-92, Corps of Engineers and JTF-6 (Joint Task Force-Six) construction of primary fence Smuggler's Gulch and Goat Canyon

Negative Determinations

1. ND-20-92, Corps of Engineers, fence repairs
2. ND-99-92 Corps of Engineers, fence repairs
3. ND-41-93, Corps of Engineers, modify fence location, Goat Canyon
4. ND-118-96, INS, fence along U.S. and Mexican border, starting one mile east of treatment plant (Area IV improvements)
5. ND-9-97, INS, construct multi-tiered fence
6. ND-036-01 and ND-39-03, INS, repair portion of border fence at Yogurt Canyon
7. ND-109-01, INS, repair of beach fence

The CBP states in its consistency determination that the proposal "... is similar to the construction of the Border Infrastructure System in Area IV, for which a Negative Determination was issued...". The Commission disagrees. The Commission has been quite clear that in authorizing past secondary fencing and patrol roads in area IV, and in authorizing past strengthening of primary fencing (see CD-111-92, ND 118-96, ND 41-93, ND 99-92, ND-036-01 and ND-039-03), the Commission has supported and authorized primary fence fortification and roads where significant resource conflicts were not present, while remaining concerned over the potential adverse effects posed by anticipated future submittals in areas where those conflicts were present. Those past situations were simply not comparable to the present proposal in terms of resource conflicts. For example, in ND-39-03, the Commission staff noted:

While we have a number of serious environmental concerns with the INS[CBP]'s proposed secondary fencing project throughout the coastal zone and at Border Field State Park, particularly in the Smuggler's Gulch to the Pacific Ocean segments, we support the INS[CBP]'s efforts to reestablish and maintain the existing primary fence, as we believe those efforts provide the most effective (and least environmentally damaging) method of illegal crossings deterrence. In that spirit we have repeatedly concurred with past INS[CBP] and U.S. Army Corps of Engineers consistency and negative determinations for reinforcing the primary fence (CD-111-92, ND 118-96, ND 41-93, ND 99-92, and ND-036-01).

IV. SUBSTANTIVE FILE DOCUMENTS:

1. Final EIS, "Proposed Completion of a 14-Mile Border Infrastructure System, San Diego County, California," U.S. Department of Homeland Security, Final Report, July 2003.
2. INS and U.S. Army Corps of Engineers consistency and negative determinations for reinforcing the primary fence (CD-81-92, CD-83-92, CD-90-92, CD-111-92, ND-20-92, ND-99-92, ND-41-93, ND-118-96, ND-9-97, ND-036-01, ND-109-01, and ND-039-03).
3. Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) of 1996.
4. Final EIS/EIR, Goat Canyon Enhancement Project, National Oceanic and Atmospheric Administration and California Department of Parks and Recreation, December 21, 2001.
5. Coastal Development Permit portions of the Goat Canyon Enhancement Project within Coastal Commission permit jurisdiction CDP-6-02-055.
6. The Ecology of Tijuana Estuary, A National Estuarine Research Reserve, Zedler, Nordby, and Kus, PERL, San Diego State University, 1992.
7. California Coastline Preservation and Recreation Plan, California Department of Parks and Recreation, August, 1971.
8. Tia Juana River Valley Plan, City of San Diego, March 1977.
9. Regional Water Quality Control Board (RWQCB) Notice of Violation No. R9-2002-0404, December 11, 2002.
10. Coastal Commission coastal development permit numbers 5-90-913, 5-92-408, 5-93-276, 6-86-2, 6-87-611, 6-87-667, 6-88-277, 6-88-388, 6-89-195, 6-90-219, 6-90-77.
11. Results of Geotechnical Third-Party Review, Proposed Border Patrol Road Embankment, Smuggler Gulch Area, San Ysidro, California, October 3, 2003, Christian Wheeler Engineering.
12. Summary of Preliminary Geotechnical Corridor Alignment Reconnaissance, March 7, 2003, Kleinfelder.

13. Report of Geotechnical Investigation and Geologic Reconnaissance, Proposed Border Roads in Smuggler Gulch and Spring Canyon, San Ysidro, California, June, 11, 1999, Kleinfelder.

V. Attachments (under separate cover- contact Coastal Commission staff for copies).

CBP response to CCC staff report for October CCC meeting, including:

1. Chart summarizing responses
2. Annotated staff report
3. Appendix A - Specific comments indexed to staff report
4. Appendix B – Sediment analysis – response to Phil Williams and Associates comments
5. Appendix C - Graphics
6. Appendix D – City of San Diego sediment information

VI. Previously Published Attachments (sent with first mailing in October- contact Coastal Commission staff for copies).

1. CBP's Consistency Determination
2. Endangered Species Consultation for the Proposed 14-Mile Border Infrastructure System, San Diego County, California (Biological Opinion No. 1-6-03-F-1089.22), U.S. Fish and Wildlife Service, July 12, 2003.